

NEWFOUNDLAND

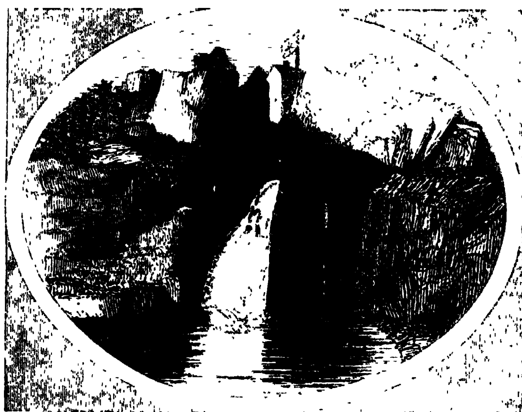
IN 1842:

A SEQUEL TO "THE CANADAS IN 1841."

BY

SIR RICHARD HENRY BONNYCASTLE, KNT.

LT.-COLONEL IN THE CORPS OF ROYAL ENGINEERS.



IN TWO VOLUMES.

VOL. I.

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TO HIS EXCELLENCY

MAJOR-GENERAL SIR JOHN HARVEY,

K.C.B., K.C.H.

COMMANDER OF THE TROOPS

AND GOVERNOR OF NEWFOUNDLAND AND ITS DEPENDENCIES,

WHOSE NAME IS SO MUCH RESPECTED IN

TRANSATLANTIC BRITAIN,

THIS WORK IS DEDICATED,

BY HIS VERY FAITHFUL SERVANT.

RICHARD HENRY BONNYCASTLE.

St. John's, Newfoundland,
26th April, 1842.

PREFACE.

THE author begs leave to state that his object in writing this work is the same as that which prompted him to make a selection from his notes respecting "The Canadas in 1841" —a desire that the British public may become better acquainted with an important British colony through the medium of a person unconnected with the country described, and therefore unbiassed by any local influences, politics, or prejudices, but one whose military duties have stationed him there for a time.

It may be alleged, that the vast territory of Labrador, which is included in the government of Newfoundland, ought also to have been treated of. But this would have increased the

dimensions of the work too much, as another volume must, in that case, have been required; such a volume, however, may possibly be produced at some future period.

The present position of Newfoundland, where a new system of colonial government is just at this moment an object of interest, and the vast importance, to the mother country, of the island, assumed by its geographical and political position, as the key of Canada, must tend, it is conceived, further to develop the great interests to the British nation of Canada and the North American colonies, or Transatlantic Britain.

It may be added, that this description of the most ancient colony of Great Britain is only the precursor of another — a more comprehensive and a larger examination into the present position and future prospects of Canada, which the author is about to put into a form fitted to meet the public eye.

R. H. B.

St. John's, Newfoundland,
26th April, 1842.

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NEWFOUNDLAND

IN 1842.

PART I.

POLITICAL AND GENERAL HISTORY OF NEWFOUNDLAND.

CHAPTER I.

HISTORY TO THE ERA OF POSSESSION AND FIRST SETTLEMENT, OR FROM 1497 TO 1612.

So little interest was formerly excited about this colony, the most ancient of Great Britain, that its early history is obscured by neglect and fable.

I shall not endeavour to mystify it still further by useless inquiries as to whether it was the wine or the vine land of the early navigators — whether the Red Indians of Newfoundland are the descendants of Tartars, or of Scandinavians—or whether the sea kings extended their sway over its shores or not;

but shall content myself with commencing at that epoch when the arts and sciences of Europe were reviving from the utter obscurity they had for ages been involved in, and during which benighted period it has been conjectured, without sufficient reason, that America received European colonists, who have since so strangely, however, vanished from the face of a continent covering one half of the habitable globe.

The discovery of the West Indies by Columbus, whose fair fame has been tarnished by doubts as to his capacity, and by making him merely the follower out of some visionary forerunners, had a wonderful effect upon maritime nations, and however they may in that age have envied his genius and depreciated his extraordinary mission, they trod in his footsteps with the most eager and absorbing anxiety for the final discovery of Cathay— that region of gold, pearls, and diamonds, which was to enrich every hardy adventurer.

But previously to entering upon the subject of this section, it is desirable to make a few remarks upon the object of the work.

That object is, chiefly, an endeavour to inform the British public, as far as the author may be

enabled, upon the state of the most neglected of our colonies, which, although the nearest to the mother country in point of space, appears to be the most remote from observation.

Hitherto this most ancient and important settlement, Newfoundland, has been looked upon merely as a great nursery for hardy seamen, rather than as an immense adjunct to the trade, the power, and resources of the empire, or as the real key of the continent of Northern America.

The only readable works upon this country, in modern times, are Macgregor's and Montgomery Martin's Geographical Dictionaries of the British American Colonies; for Chappell, Anspach, and Reeves, afford very little local information, and express opinions coloured by circumstances connected with the residence or visits of their authors at St. John's, in periods when no other than party views prevailed, and when society was wholly limited to the houses of government officers, or to those of a few respectable merchants, and when the dictum of a naval governor was the law of the land.

It was requisite, in order to obtain an unbiassed knowledge of the colony, that a person describing Newfoundland should be independent

of all parties, and have resided long enough there to become intimately acquainted with the state of things; and it is probable that few besides military men could be so favourably situated in that respect.

Formerly Newfoundland was considered as a very pleasant place of banishment for an officer in the army; whilst the merchant, having long toiled for riches drawn from the exhaustless ocean, no sooner acquired them than he left the island for the enjoyments and the more genial climate of his native soil.

The case is now altering rapidly: the moveable military men are confined to the scientific corps of the Ordnance service, who rarely stay more than four, five, or six years on the station, and there is a permanent colonial regiment, consisting chiefly, at present, of old service officers, appointed to do the garrison duty of the capital and outposts. A new race of inhabitants is springing up, who, born on the soil, cherish and fondly adhere to it; the population is no longer a fluctuating one; the island has obtained a representative government; it has been discovered that it is by no means so barren and infertile as was uniformly stated by interested persons, and that it is not that foggy

country where lantern light is requisite at noon-day, but is possessed of a climate of extraordinary salubrity. Its population is steadily advancing; roads are opening; agriculture rears its head; and in short, from having been a mere mercantile depôt, it now bids fair to take its rank amongst the more flourishing colonies of the neighbouring continent.

To develop its resources, to assist its commerce, to make it better known, as it deserves to be, in the Old World, is the task I have imposed upon myself during the second winter of my temporary residence; and I trust that my design may ultimately succeed; for, unbiassed by politics, I have only the welfare and renown of Britain and of this island gem in view.

In tracing its general history, I have thought it a matter of great interest to the native reader to enter somewhat largely upon the original discovery—a subject hitherto only hinted at in all the modern gazetteers and geographical works; and being in possession of some very ancient histories of the New World, I have not hesitated to extract largely from them.

It is extraordinary how vague even the details of the voyages of Columbus are found to be, by the most patient investigator, and there-

fore a great deal of light cannot be expected to be thrown upon those of Cabot, whose claims as an illustrious navigator have slumbered for ages in oblivion.

In searching into records long since devoted more to the worm than to the care of the historian, we, however, find many highly interesting particulars which have been consigned to neglect, in consequence of the superior success which the contemporaries of the admiral of the ocean met with, when compared with Cabot and those who came after him. Gold, all-powerful gold, was the thing sought for, and in the frozen regions of Terra Nova the disappointment met with from finding only glittering pyrites, rendered the public careless of the accounts given of that region; and thus, no doubt, many valuable journals were lost, and many anxious thoughts of the early northwestern searchers for the riches of the east were nipped in the bud, and remained unprinted and unheeded.

Herrera, the most careful and most diligent collector of the primal voyages, shews us, in a few words, the apathy of Henry the Seventh of England, and his cold, calculating policy, when he suffered the dominion of the New World to slip, uncared for, out of his grasp.

Columbus meeting with nothing but disappointment and repulse in his favourite scheme, sent his brother Bartholomew to England, to negotiate with that prince. He was taken by corsairs on the way thither, and detained for seven years; but, learning the language, the disposition of the court, and of the people, having obtained access to the minister, and carried on his suit, which he at last accomplished, he was ordered to return to Spain, to find his brother, and conclude the necessary preliminaries for the discovery.

So unfrequent was communication between distant countries in those days, that it was not until Bartholomew reached Paris, that the fears he had entertained for his brother's life were quieted, as he had not heard from him during the whole period of his voluntary exile, and there he found that he was not only living, but had accomplished, under the auspices of the Catholic kings, the object of their fervent desires. Charles, the King of France, informed the Genoese of his brother's success, and Bartholomew, having quitted Henry and his avarice, sailed for the new world.

Charles presented him with a hundred crowns, and forwarded him on his journey to Spain,

whence he was despatched with three store-ships for Hispaniola, and found the Admiral, who made him Adelantado, or Lieutenant-Governor, of the newly discovered regions.*

Bartholomew left behind him, with King Henry, a map of the world, shewing the probable road to the Indies and Spice Islands, which contained some Latin lines urging the voyage, and was dated London, the 21st February, 1480.†

As soon as the news of this splendid discovery reached England, the tardy vigour of Henry was roused, and he became as eager to share in the glory of forwarding voyages to the Indies as he had been cautious before. Of Bartholomew, he of course neither heard

* Herrera Historia General de los Yndios Ocidentales, &c., tomo primo, capitulo xiii. p. 48. Edition in 4 vols. folio, 1728. Amberes.

† If this date is correct, (but I think it should be 1490, unless the map was made before he left Portugal,) Bartholomew must have been fifteen years on his embassy. It is, however, taken from the Italian work entitled "Ferdinando Colombo Storia della vita e de' fatte dell' Ammiraglio Cristoforo Colombo suo padre," &c., printed at Venice, in 8vo, 1570. The extract will be given in the Appendix, No. I., as it shews the first glimmering of English enterprise in Atlantic speculation.

nor expected to hear further, and it is presumed that his attention had been kept awake by another adventurous Italian, who then occasionally resided in England.

The family of this foreigner became afterwards of as much importance and interest to Britain as Columbus had been to Spain.

John Cabot, a Venetian, traded to Bristol for several years previously to the first voyage of the admiral, and most probably was an intimate acquaintance of Bartholomew, who subsisted upon the rare art in those days of card or chart making, and by teaching navigation.

After the discovery of insular America became well known in England, we find that Henry VII. granted letters patent to John Cabot and his three sons, Ludovicus, Sebastiano, and Sancius, to proceed with five ships to the discovery of new and unknown lands, unvisited and unclaimed by Christians in the seas of the East, the West, and the North, and from and to the port of Bristol only. This patent is dated Westminster, 5th March, 1496. in the eleventh year of his reign.*

* Fxamplar Litterarum Henrici Regis Angliæ VII. Johanni Cabotto, civi Venetiarum, ac Ludovico, Sebastiano et Sancto filiis dicti Johannis ad inveniendum

In the Rolls there is another licensed patent to John Cabot and Sebastian, his son, for any haven for six ships, dated in the thirteenth year of Henry VII., or in 1498. These voyages had the sole object of finding the Meta Incognita, or unknown strait, which was to lead to the rich country of Cathay, a subject, after the lapse of several hundred years, not yet despaired of, and now nearly accomplished by Great Britain.

In the Appendix to this work is given a list of various authors who wrote about or soon after the time of Cabot, describing his discovery of Newfoundland, and whose works may best be consulted, and from which extracts will now be made.

It appears that he sailed from Bristol with a fleet of five small ships containing three hundred men furnished by Henry VII., who, although avaricious by nature, possessed a prudent and thoughtful mind, and soon per-

discooperiendum et investigandum, quascunque insulas, patrias, regiones, sive provincias, gentilium et infidelium in quacunque parte mundi positas quæ Christianis omnibus ante hæc tempora fuerint incognitæ, Teste Regi apud Westmon. quinto die Martii. An. Reg. XI. 1496.

ceived the folly which his ministers had committed, in refusing so long the offers of Bartholomew Columbus on behalf of his celebrated brother, and therefore hastened to the aid of another foreigner, projecting a more northern route for the Oriental regions.

The Cabots were experienced and expert pilots, as navigators were then styled; but whether John Cabot went on this voyage or not, does not clearly appear by any record; and in Richard Eden's "Abridgment of Travels"* we find, that he mentions Sebastian's having told him that his father died soon after the news of the discovery of Columbus became known in England. This renders it just barely possible that he did command the fleet;† but it is the more improbable, as it will be seen, in the extracts from early writers, that Sebastian is always mentioned as the first discoverer of the northern continent of America.

* Printed in 1555, with the first three Decades of the New World, or West India. London, 4to, black letter, page 255, in the account of Muscovy and Cathay, marginal note.

† In the Appendix, No. II., I have extracted the whole memoir of Cabot from "Campbell's Lives of the Admirals," who gives all the information he could gather.

He sailed from England in the spring of 1497, five years after Columbus had seen the West Indies, to penetrate by a north-western route to China and the Spice Islands.

There is, unfortunately, no regular journal known to exist of this voyage, and we must therefore be contented with what can be gathered out of the works of the early writers; Hackluyt being one of the chief sources, but not containing so much personal notice as can be found in the writings of Peter Martyr, a contemporary, Oviedo, Gomara, and the obscure work of Richard Eden.

It is said, that Sebastian Cabot's fleet made the land of the New World near Bonavista Bay, about the island of *Baccalao*, on the 24th June, 1497.

This subject is, of course, of much interest to the natives of Newfoundland; and I shall therefore quote the observations of such writers as I am able to refer to, either by translations of the original works, or by transcripts.

Peter Martyr, a learned clergyman, in his voluminous work, called, "*The Decades of the Ocean*," written in great part during the lifetime of Columbus and Cabot, with whom he was personally acquainted, and professing

to state from authority the subjects he treats upon, which are the different discoveries in the New World, then constantly occurring, says, when mentioning the passage to the Indies by the west, in his third Decade,*—" These northern or frozen seas have been searched by Sebastian Cabot, a Venetian born, who, in his infancy, was carried by his parents to England, where they occasionally went upon commercial pursuits, it being the custom of the Venetians to leave no part of the world untrodden in search of riches. He furnished two vessels at his own cost in England, and, with three hundred men, directed his course so far towards the North Pole, that even in July he found almost continual daylight, and immense heaps of ice floating in the sea ; but observing that the land was clear of it, owing to the heat of the sun having melted the ice near it, he turned westward, and, coasting by the south, sailed so far that he came into the latitude of the Straits of Hercules, having the

* "De Orbe Novo, Petri Martyris Anglerii Mediolanensis, Protonotarii, et Caroli quinti Senatoris, Decades octo diligenti temporum observatione, et utilissimis annotationibus illustratæ, suoque nitori restitutæ." Paris, 1587, 8vo. In italic print.

North Pole elevated, in the same manner, in the same degree. He sailed thus so far westward, that he had the Island of Cuba on his left hand, in like manner, in the same parallel of longitude.* As he passed by the coasts of this vast country, which he named 'Baccalaos,' ('Terra Baccallearum,') he said he found the course of the oceanic waters was towards the west, but that they flowed more softly and gently than those swift currents which the Spaniards had found in their southern navigations.

"Sebastian Cabot called those countries Baccalaos, because in the seas there he found such multitudes of large fish, like tunnies, which the inhabitants call *baccalaos*, that they sometimes hindered his ships; he found, also, that the people of these regions were clothed in the skins of beasts, but were not without the use of reason.

"He said that there were plenty of bears there, which eat fish, plunging themselves into the water where they perceived a number of

* In the original Latin the sentence is, "*Ad occidentemque profectus tantum est, ut Cubum insulam a lævo longitudine graduum pene parem habuerit.*" Editio 1587, in italic print, now very rare.

these fish to be, and then, fastening their claws in their scales, dragged them on shore, and devoured them, so that thus feeding on fish, they are not so dangerous to man.

"He declared, also, that in many places of these territories he saw plenty of latten amongst the inhabitants. Cabot is my particular friend, with whom I am on terms of much familiarity, and I delight to have him sometimes to keep me company in my own house, for being sent for from England by the Catholic King of Castile, after the death of Henry VII., he was appointed to assist our council, and did assist us in managing the affairs of the New Indies, whilst he was patiently waiting for aid to discover this hidden secret of nature (the Meta Incognita, or western road to China and Japan.) This voyage is now, at last, appointed for the year next ensuing, being the year of Christ MDXVI., and whatever occurs from it, I shall inform your holiness (Leo X.) of, if I live. Some of the Spaniards deny that Cabot was the first discoverer of Baccalaos, and affirm that he never went so far west; but it must now suffice for me to have said thus

much of the gulf and straits, and of Sebastian Cabot."

It would embarrass the narrative of the discovery of Newfoundland too much, to enter into all the arguments of the Spaniards and others, about previous discoveries of the continent, etc.

Ortelius averred that Istotiland (the northern part of America, which extends towards Europe) and the islands Greenland, Iceland, and Friezland were discovered by fishermen from Friezland, who were driven there by a storm; and again, in 1390, by Antonio Zeno, a Venetian gentleman, who sailed there under Zechmni, King of Friezland, of which expedition there are extant, in Italian, abridgments or collections, made by Francisco Marcolino, from the letters of M. Nicolo and Antonio Zeni, "Ortelius Thesaurus Geographicus," etc., fol. 6, next before the map of the Mar del Zur, 1596, Antverpiæ. This Zenò fitted out a ship from Venice, and was cast away on Friezland, in a voyage to England and Flanders, in 1380. Zechmni was Prince of Poland, on the south side of Friezland, and Duke of Sorani, opposite to Scotland.

He was then attempting to conquer all that country, and had defeated the King of Norway. Zeno lived many years with him.

Cabot's discovery was probably as much envied and sneered at, at the time, as that of Columbus, so well exemplified by the well known story of the egg.

For these reasons, it is not my intention to enter upon the discovery of America by the Northmen and Welshmen; but in order to save the trouble of reference upon that subject to the reader, who may not have access to the works upon the controversy, I have added an extract from Hackluyt, in No. 3, Appendix.

It may also interest the reader, to add the translation of a passage about the discovery of a new world, from the Morgante Maggiore of Pulci, a work written before Columbus sailed on his first voyage, and whose author was also dead previous to that event:—

" *The water is level throughout its whole extent, although like the earth, it has the form of a globe. Mankind in those ages were much more ignorant than now. Hercules would blush at this day, for having fixed his columns: vessels will soon pass far beyond them. They may soon reach another*

hemisphere, because everything tends to its centre; in like manner, as by a divine mystery, the earth is suspended in the midst of the stars, below are cities and empires, which were ancient. The inhabitants of these regions were called Antipodes. They have plants and animals as well as you, and wage wars, as well as you."—MORGANTE MAGGIORE, CXXV. St. 229, etc.

Dante, who flourished between 1285 and 1321, or more than 170 years before Columbus, has also indicated the number and position of the stars composing the polar constellations of the Austral hemisphere, and says, that when Lucifer fell from heaven, his body pierced through the earth, half remaining on our side of the centre, and the other halt on the side of the Antipodes, the shock driving most of the ocean waters to the southern hemisphere, and only one high mountain remaining uncovered, on which the poet placed his purgatory. The fall of the morning star happening before the creation of Adam, Dante could not believe that the Antipodal or southern hemisphere was ever inhabited.

Petrarch, a better cosmogonist, geographer,

and classic, about thirty years afterwards, ventured to hint, that there were beings on our globe unknown to us, but of our own nature in those regions—

> "Nella stagion che il ciel rapido inchina
> Vers occidente, e che il dì nostra vola
> A gente che delle forze e' capetto."

Fifty years after Petrarch thus predicted, the existence of the Antipodal race was fully demonstrated; but it has been cleverly said, that Pulci "raises a devil to announce that fact." His fellow-citizen, Paolo Toscanelli, a most admirable astronomer and mathematician, wrote to Columbus, exhorting him to undertake the discovery of it.

Although often repeated, we shall close this long digression with the prophecy of Seneca, the first on record upon this interesting subject:—

> "Venient annis
> Sæcula seris, quibus oceanus
> Vincula rerum laxet, et ingens
> Pateat tellus, Tiphisque novos
> Detegat orbes,
> Nec sit terris ultima Thyle."

The bonds are broken, the age has arrived, and there are no longer new worlds to discover.

A similar mention of Baccalaos and of Sebastian Cabot is made in the "Summary of the General History of the Indies," by Gonzales Fernando de Oviedo, written to the Emperor Charles V., in the year 1525. It leaves the matter in great uncertainty whether that land was the continent or the island of which we are writing.

But the most interesting notice of all is contained in a "Discourse of divers Voyages and Ways, by which Spices, Precious Stones, and Gold were brought in old time from India into Europe and other Parts of the World, also of the Voyage to Cathay and East India by the North Sea. And of certain Secrets touching the same Voyage declared by the Duke of Moscovie, his Ambassador, to an excellent learned Gentleman of Italy, named Galeatius Butrigarius. Likewise of the Voyages of that worthy old man, Sebastian Cabot, yet living in England, and at this present the Governor of the Company of the Merchants of Cathay, in the city of London."*

* See "Richard Eden's Gatherings from Writers on the New World," London, 1555, and also in "Purchas his Pilgrimage," folio, London, 1615, vol. ii. p. 807, where there is a short "Account of the Discovery of

It will afford amusement to the reader to quote this account of Labrador and New-

Newfoundland, by John Cabot, a Venetian, and Sebastian, his Son, on the 24th of June, 1497, in English Ships, with a Commission of Henry VII.; with the Account given by Sebastian, of the coming home along the coasts of America to Florida." This differs but little from any of the above more rare and less accessible works, except in fixing the date of seeing the land.

Purchas also gives part of the above extract from the letter to Galeatius Butrigarius, the Pope's Legate in Spain, in page 809, and in vol. iii. page 417; and in Hackluyt's celebrated collection, published in 1589, at folio 515, it is given briefly, with a statement of the three savages brought home by Sebastian, and presented to the king in the fourteenth year of his reign; whilst at page 511 of Hackluyt's ponderous folio is an "Extract out of the Mapp of Sebastian Cabot, cut by Clement Adams, concerning his discovery of the West Indies, which was to be seen in her Majesty Queen Elizabeth's private gallery at Westminster, and in many merchants' houses." These works of Purchas and Hackluyt, the former being a continuation and enlargement of the latter, are so bulky that it is difficult for a military man to add them to his stock of books; so that I cannot quote, excepting from memoranda, at this remote station, directly from them, but they may be seen at any large public library in Great Britain or Ireland by the curious. They will add, however, very little to the stock of information, as the early navigators, with the exception of Sir Walter Raleigh, were, even including the great Columbus, better pilots than penmen.

foundland in the words of the old black-letter text now before me :—

"OF THE LANDES OF LABRADOR AND BACCALAOS, LYINGE WEST AND NORTH-WEST FROM ENGLANDE, AND BEINGE PARTE OF THE FIRME LANDE OF THE WEST INDIES.

"Many haue traualyed to search the coast of the lande of Laborador, as well to thintente to knowe howe farre or whyther it reachethe, as also whether there bee any passage by sea throughe the same into the Sea of Sur and the Islandes of Maluca, which are under the Equinoctiall line: thinkynge that the waye thyther shulde greatly bee shortened by this vyage. The Spanyardes, as to whose ryght the sayde islandes of spices perteyne, dyd fyrst seeke to fynde the same by this way. The Portugales also hauynge the trade of spices in theyr handes, dyd trauayle to fynde the same: although hetherto neyther anye suche passage is founde or the ende of that lande. In the yeare a thousande and fiue hundreth, Gaspar Cortesreales made a vyage thyther with two carauelles; but founde not the streyght or passage he sought. At his

being there he named the islandes that lye in the mouth of the goulfe Quadrado, after his name, Cortesreales, lying in the L degrees and more: and browghte from that lande abowt threescore men for slaues. He greatly maruayled to beholde the houge quantitie of snowe and ise. For the sea is there frosen excedyngly. Thinhabitauntes are men of good corporature, although tawny like the Indies, and laborious. They paynte theyr bodyes, and weare braselettes and hoopes of syluer and copper. Theyr apparel is made of the skynnes of marternes and dyvers other beastes, whiche they weare with the heare inwarde in wynter, and owtwarde in soommer. This apparell they gyrde to theyr bodyes with gyrdels made of cotton or the synewes of fysshes and beastes. They eate fysshe more then any other thynge, and especially salmons, althoughe they have foules and frute. They make theyr houses of timber, whereof they haue great plentie: and in the steade of tyles, couer them with the skynnes of fysshes and beastes. It is said also that there are grifes in this land: and that the beares and many other beastes and foules are whyte. To this and the islandes abowte the same, the Britons

are accustomed to resorte: as men of nature agreeable vnto them, and borne vnder the same altitude and temperature. The Norwayes also sayled thyther with the pylot cauled John Seoluo: and the Englysshe men with Sebastian Cabot.

"The coaste of the lande of Baccalaos is a greate tracte, and the altitude thereof is xlviii degrees and a halfe. Sebastian Cabot was the fyrst that browght any knowleage of this land. For being in Englande in the dayes of Kyng Henry the Seuenth, he furnysshed twoo shippes at his owne charges or (as some say) at the kynges, whom he pursuaded that a passage might bee found to Cathay by the North Seas, and that spices myght bee browght from thense soner by that way, then by the vyage the Portugales vse by the Sea of Sur. He went also to knowe what maner of landes those Indies were to inhabite. He had with hym three hundreth men, and directed his course by the tracte of islande uppon the Cape of Laborador at lviii degrees: affirmynge that in the monethe of July there was such could and heapes of ise that he durst passe no further: also that the dayes were very longe, and in maner withowt

nyght, and the nyghtes very cleare. Certeyne it is, that at the lx degrees, the longest day is of xviii houres. But consyderynge the coulde and the straungenes of the unknowne lande, he turned his course from thense to the West, folowynge the coast of the land of Baccalaos vnto the xxxviii degrees, from whense he returned to Englande. To conclude, the Brytons and Danes have sayled to the Baccalaos; and Jacques Cartier, a Frenchman, was there twyse with three galeons: as one in the yeare xxxiiii and the other in the xxxv, and chose the lande to inhabite from the xlv degrees to the li, beinge as good a launde as Fraunce, and al thynges therein commune to such as fyrst possesse the same.

"Of these lands, Jacobus Bastaldus wryteth thus:—'The Newe land of Baccalaos is a coulde region, whose inhabytauntes are idolatours, and praye to the soone and moone and dyvers idoles. They are whyte people, and very rustical. For they eate flesshe and fysshe and all other thynges rawe. Sumtymes also they eate mans flesshe priuilye, so that theyr Caciqui have no knowleage thereof. The apparell of both the men and women is made of beares skynnes, although they have sables and mar-

ternes, not greatly esteemed bycause they are lyttle. Some of them go naked in soomer, and weare apparell only in wynter. The Brytons and Frenche men are accustomed to take fysshe in the coaste of these lands, where is founde great plentie of tunnyes, which the inhabitauntes caul Baccalaos, wherof the lande was so named. Northwarde from the region of Baccalaos is the land of Laborador, all full of mountaynes and great woodes, in whiche are manye beares and wylde boares. Thinhabitantes are idolatoures and warlike people, apparelled as are they of Baccalaos. In all this newe lande is neyther citie or castell, but they lyve in companies lyke heardes of beastes.'"

Sebastian Cabot was afterwards employed by the Spanish court, and discovered the Rio de la Plata and Brasil, and was so highly thought of, that he was appointed by the emperor, with other learned mathematicians and navigators, to decide upon the question of boundary between Spain and Portugal as affected the Indies, on which the notable bull of the Pope, which evinced such ignorance of geography in those days, was founded.

He was also pilot-major of the Indies, and no one was permitted to sail on voyages of

discovery without his licence. So great, indeed, was his fame, that it was made a special article of treaty between John the Fourth and the Emperor, that he should not be employed in discovering the Spice Islands.*

The uncertainty which prevails over all the accounts of Newfoundland at this early period, rests also over its discoverer's place of birth; for in reading all the accounts I have been able to gather concerning him, although it is very probable he was our countryman, yet it is not anywhere stated so positively as in the following extract from Richard Eden's description of the conversation which was held by Galeatius Butrigarius, the pope's legate in Spain, with a learned gentleman of Italy, Hieronimus Fracastorius, in which may be gathered more of the life of Cabot than by any other account of him. The marginal notes would seem to indicate that the translator knew him, and that he was then living in London at a very advanced age; for if he was thirty when he discovered Newfoundland, he must have been eighty-eight in 1555. In the

* See the work of Francisco Lopez de Gomara, "Historia Universal de las Yndias, y del Nuevo Mundo." 1552.

Biog. Brit., and in Mortimer's Dictionary, it is stated that he was born in 1477, which would make him only twenty when he achieved a name that will last as long as history endures; and that he died in 1557, or at eighty years of age. Thus he was contemporary with the laborious editor of "Travels in the West Indies," and the note is probably true.

He must have been a man of extraordinary powers of mind; for in 1552, when at the advanced age of seventy-five, if the latter account be correct, we find him projecting the plan of the first voyage of the English to Russia; thus laying the foundation of the great commerce with the northern regions of Europe, and for which service he was made governor for life of the first Russian company in England.

Cabot* was, in fact, equal in many respects to Columbus; and really discovered the principal part of the New World a year before Columbus saw the main land. The only monument ever erected to his fame that I have

* In "Campbell's Lives of the Admirals" he is said to have been the author of a work entitled, "Navigatione nelle Parte Settentrionale," printed at Venice, in folio. I have never met with it.

heard of, or seen, has been an attempt by a very ingenious hydrographer, Mr. John Purdy, in 1821, whose excellent large four-sheet chart map of British North America is called Cabotia—a name which, although not so euphonious as America or Colombia, is strictly applicable to the whole continent from the Frozen Seas to the Gulf of Mexico.*

I shall, in order to shew the changes in our language and mode of writing, prefer giving the black-letter account above mentioned than to modernize it; the more particularly as it was certainly written and printed in the life-time of Cabot, and probably read by him.

It proceeds thus, after detailing a great deal of learned discourse about the north-west and north-east passage to Cathay:—

"And here makynge a certayne pause, and turnynge hymselfe towards us, he sayde, 'Doo yow not understande to this purpose how to passe to India toward the north-weste wind, as

* When all the political and other differences in St. John's are softened by time, and the people begin to feel that their own consequence does not depend upon distinctions of creeds and conditions, it is to be hoped that a suitable monument will be erected to the genius and enterprise of Sebastian Cabot in that capital.

dyd of late a citizen of Venese, so valiente a man, and so well practysed in all thynges pertaynynge to nauigations and the science of cosmographie, that at this present he hath not his lyke in Spayne, insomuch that for his vertues he is preferred aboue all other pylottes that sayle to the West Indies, who may not passe thyther withowte his licence, and is therefore cauled *Piloto Maggiore* (that is) the graunde pylote. And when wee sayde that wee knewe him not, he proceadeth, sayinge, that beinge certeyne yeares in the citie of Siuile, and desyrovs to haue sum knowleage of the nauigations of the Spanyardes, it was tould hym that there was in the citie a valient man, a Venecian borne, named Sebastian Cabote, who had the charge of those thynges, being an expert man in that science, and one that coulde make cardes for the sea with his owne hande.* And that by this reporte, seekynge his acquaintaunce, he founde hym a very gentell person, who enterteyned him frendly, and shewed hym many

* "Sebastian Cabot tould me that he was borne in Brystowe, and that at iiii yeare ould he was carried with his father to Venise, and so returned ageyne into Englande with his father after certeyne yeeres, whereby he was thought to have bin born in Venice."

thynges, and amonge other a large mappe of the worlde, with certeine particular nauigations as well of the Portugales as of the Spanyardes. And that he spake further unto hym, to this effecte. When my father departed from Ve nese many yeeres sense, to dwell in Englande, to folowe the trade of marchandies, he tooke me with him to the citie of London whyle I was very yonge, yet hauynge neuertheless some knowleage of letters of humanitie and of the sphere. And when my father dyed, in that tyme when newes was brought that Don Christopher Colonus, Genuese, had discovered the coastes of India, whereof was great talke in all the courte of kynge Henry the Seuenth, who then reigned: in so much that all men with great admiration affirmed it to bee a thynge more diuine then humane, to sayle by the Weste into the East where spices growe, by a way that was never known before. By which fame and reporte, there increased in my harte a great flame of desyre to attempte sum notable thynge. And understanding, by reason of the sphere, that if I shulde sayle by the waye of the north-west winde, I shulde by a shorter tracte coome to India, I thereuppon caused the kynge to be aduertised of my diuise, who immediately

commaunded two carauels to bee furnyshed with all thynges apperteynynge to the vyage, which was, as farre as I remember, in the yeare 1496, in the begynnynge of sommer. Begynnynge therfore to saile towarde Northweste, not thynkynge to fynde any other lande than that of CATHAY, and from thense to turne towarde India. But after certeine dayes, I founde that the lande ranne towarde the Northe, which was to me a great displeasure. Neverthelesse, saylinge along by the coast, to see if I could fynde any goulfe that turned, I founde the lande styll continent to the 56 degree vnder owre pole.* And seing that there the coast turned towarde the East, dispayringe to fynd the passage, I turned backe ageyne, and sayled downe by the coast of that lande towarde the Equinoctiall (euer with intent to fynde the sayde passage to India), and came to that parte of this firme land which is nowe cauled FLORIDA. Where, my vyttayles fayling, I departed from thense, and returned into England, where I founde great tumultes amonge the people, and preparaunce for warres in Scot-

* If he went so high as above 56, he must have made the land near Hudson's Bay first.

lande: by reason whereof, there was no more consideration had to this vyage: wheruppon I wente into Spayne to the Catholyke kynge, and queene Elizabeth: who being aduertized what I had doone, interteyned me, and at theyr charges furnysshed certeyne shyppes wherewith they caused me to sayle to discouer the coastes of Brasile, where I founde an exceadynge great and large ryuer, named at this present *Rio de la Plata* (that is) the ryuer of syluer,* into the which I sayled, and followed it into the firme lande more than syxe hundrethe leagues, fyndynge it euery where verye fayre and inhabited with infinite people, which with admyration came runnynge dayly to oure shyppes. Into this ryuer, runne so many other riuers, that it is in maner incredible: after this, I made many other vyages which I now pretermitte. And nowe wexynge owlde, I gyue my selfe to reste from such trauayles bycause there are nowe many younge and lusty pylotes and mariners of good experience, by whose forwardnesse I doo rejoyse in the frutes

* "Cabot told me that in a region of this ryuer he sowed l graynes of wheate in September, and gathered thereof l thousand in December, as wryteth also Francisco Lopez."

of my labours, and rest with the charge of this office as yowe see. And this is as much as I have understoode of master Sebastian Cabote, as I haue gathered oute of dyuers nauigations wrytten in the Italian toonge."

It is a very unfortunate circumstance that only such disjointed contemporary records of Cabot's navigation, of which the above specimen is perhaps the best, should have been hitherto discovered.

Hackluyt is not much more satisfactory; Howe and Grafton assert that he was a Genoese, and other creditable authors are equally decided as to Bristol having been his birthplace. It appears that his father first attracted Henry VII.'s notice during some negotiations with the Danish king, by which the port of Bristol was much benefited; that Sebastian was carefully instructed for a seafaring life from his earliest youth; and that he had made several voyages before his seventeenth year. According to Hackluyt and other authors, his first great voyage was the one we have been treating of, and the discrepancy in the accounts of the number of vessels employed may arise from only two of the ships being of any size, the other four having been mere small

barks, which were fitted out by some Bristol merchants who were interested in one of the larger vessels, which was got ready at Bristol at the king's expense, and freighted by Londoners. These four barks were appointed to attend her, and were laden with coarse cloths, caps, lace-points, and trinkets.

It is averred that there exists a manuscript calendar of Bristol, wherein the year 1499 is stated to be that of the voyage, and that Sebastian then accompanied his father, John Cabot. They steered to the north-west, in the hopes of reaching India by a shorter route than that taken by Columbus, and to find the coast of China or Cathay, of which Marco Polo had given such flattering accounts. After sailing for some weeks on the same course, they discovered Newfoundland, and some accounts state that the course was due west, in the parallel of Bristol.

The mode by which the day of the discovery has been fixed was as follows: from a map, engraved by Clement Adams and drawn by Sebastian Cabot, which was deposited in the Privy Gallery at Whitehall. It had a portrait of the author, under which was the following inscription, "Effigies Seb. Caboti,

Angli Filii Jo. Caboti, Venetiani, Militis Aurati," etc.

On this map was a narrative of the discovery, in Latin, which is given in Hackluyt, vol. iii. p. 27, and thus translated by him:—

" In the yeere of our Lord 1497, John Cabot, a Venetian, and his son Sebastian, with an English fleet, set out from Bristol, and discovered that land which no man before that time had attempted, on the 24th of June, about five of the clocke, early in the morning. This land he called *Primavista*—that is to say, first seene, because, as I suppose, it was that part whereof they had the first sight from sea. That Island which lieth out before the land, he called of St. John, upon this occasion, as I thinke, because it was discovered upon the day of John the Baptist. The inhabitants of this island used to weare beasts' skinnes, and have them in as great estimation as we have our finest garments. In their warres they use bowes, arrowes, pikes, darts, woodden clubs, and slings. The soil is barren in some places, and yeeldeth little fruit, but it is full of white bears and stagges, far greater than ours. It yeildeth plenty of fish, and those very great, as seales, and those which we

commonly call salmons: there are soles* also above a yard in length, but especially there is a great abundance of that kind of fish which the savages call baccalaos (cod-fish.) In the same island also there breed hauks, but they are so blacke that they are very like to rauens, as also their partridges and eagles, which are in like sort blacke."†

Cabot brought away three of the natives, and then proceeded westward until he made the coast of Nova Scotia, and sailed along the Atlantic shore of the continent, as it is affirmed, from the 56th to the 38th degree of latitude,

* It has been conjectured by some, that Cabot must have meant Labrador as the place of his discovery, because there are no white bears in Newfoundland. This, I apprehend, is false reasoning. There is a place even on the south coast called White Bear Bay; and it is quite probable that the Polar bear has, like the walrus or sea-horse, been driven from Newfoundland by the increasing fisheries. With respect to soles, Cabot must have meant flat fish, which some of the coasts of Labrador and Newfoundland are abundantly supplied with. I never saw a sole on the coast of British America but once, and that a very young one, taken out of the belly of a codfish, in the Bay of Chaleurs.

† The partridge of Newfoundland is a ptarmigan; dark brown in summer, and white and brown in winter.

or from the coast near Hudson's Bay to Florida.

There appears much discrepancy in this narrative; and indeed the whole account of Cabot's discovery given by Hackluyt, who published his celebrated collection of voyages and travels in 1589, or thirty-two years after the death of Sebastian Cabot, is not near so conclusive as that given by Richard Eden. Fabian's Chronicle, from which Hackluyt derived the chief of his information, gives a very concise description of the voyage, and mentions the three savages as having been brought from a part of the Indies, and presented to Henry VII., in the fourteenth year of his reign, or in 1499.*

The map we have mentioned would, perhaps, if a copy of it exists, settle the question whether it was Labrador or Newfoundland which Cabot first saw. If he made the land in 56° north latitude,† it must have been Labrador, but then there is no considerable island on that portion of its coast. If he really sailed in the parallel of Bristol it must have been New-

* Vide Hackluyt, folio of 1598, page 515.

† If the degrees of longitude were meant, it would be nearer the mark from Ferro.

foundland. The ice in July is no uncommon occurrence on its eastern shores, as, during a voyage from England in 1840, I saw an ice-berg or two near the island of Baccalao, at the mouth of Conception Bay, as late as the last week in July, and they frequently remain all the summer in the Straits of Belleisle. He may, however, have reached 56°, and have merely seen the land, whence, being driven southward, his first real discovery and inter-view with the natives took place, as I believe, at Baccalao Island, which is in 48° 12′, and just where the coast is most prominently east. So that probably Cabot ascertained that New-foundland was an island by observing the bend-ing of the land, from the Straits of Belleisle to the shores of the great mouth of the Gulf of St. Lawrence.

He returned with a cargo to England which must have been procured in Newfoundland, and consisted possibly of peltries, for there is no account of his landing on any part of the shores of the Atlantic coast of Nova Scotia or of the United States, or of his having attempted either to make a conquest or a settlement.

It has been said by authors favourable to the idea that Sebastian Cabot was the disco-

verer of the Gulf of St. Lawrence, that he landed at St. John's, or Prince Edward's Island;—but that notion appears highly improbable; whilst it is averred that he made several subsequent voyages to this portion of America. No evidences to this effect have, however, been adduced, and that of Richard Eden to the contrary appears conclusive.

In short, for the twenty years after the discovery of Newfoundland, all correct traces of Sebastian Cabot's history are lost. We hear no more of him in contemporary writers until 1516, and it is highly probable that the cautious temper of Henry VII. prevented the prosecution of northern voyages, and the search after the Meta Incognita, in consequence of Cabot's exploit proving so unproductive and dangerous. In 1516, when Sir Thomas Pert was Vice-Admiral of England, an expedition for the discovery of a southern passage, under the guidance of Sebastian Cabot, was fitted out. He steered for Brazil, but failing in the attempt, went to Hispaniola and Puerto Rico.

Disappointment and chagrin, it is conjectured, caused him to leave England, and to enter into the service of Spain, where nautical merit was then better rewarded. Accord-

ingly we find that Herrera, the best and most correct Spanish historian of the Indies, states that he was received according to his acquired fame, and made *piloto mayor*, or principal pilot of the kingdom. I have searched Herrera's ponderous work, in four folio volumes, in vain, to find an account of the previous path by which Cabot was so distinguished; and it is only in the first that anything is said about it,* where Herrera affords the

* The following is all Herrera says:—"Porque aunque muchos navegaron àzia el Norte costeando los Baccalaos, y tierra del Labrador, como mostrasa aquella parte poco rigueza, no úvo memoria dellos, ni aun de otros, que fuéron por la parte de Paria, salvo los que se han referido: los que por la parte del Norte descubrieron, fuéron Gaspar Cortereal Cavallero Portuguès, y un hermano suyo, el año de 1500 con dos caravèlas, y no hizo mas que dexar su nombre à las Islas que estan a la boca del golfo quadrado en mas de 50 grados, truxo 60 hombres de aquella tierra, y vino espantado de las muchas nieves, y heladas de la mar, y al fin bolvieron los dos hermanos à navegar, y se perdieron. Tambien fueron à esta tierra gentes de Norvega con el piloto Juan Seduco, y Sebastian Gaboto fué por orden del Rey Enrique VII. de Ingalaterra, con dos navios, porque tambien procurava la contratacion de la especeria, otros dizen que armò a su costa, y que iva por saber que tierras eran las Indias, y para poblar. Elevo 300 hombres, y caminaro la buelta de

reasons why the Catholic King employed Amerigo Vespucci, which was in consequence of the Portuguese and other nations being actively employed upon the great question of the unknown passage to the Spice Islands and Cathay. This document scarcely needs translating, as it is a mere recapitulation of that which has been already advanced; but short as it is, it strongly assists in the conjecture that Cabot really discovered Newfoundland instead of Labrador, and that he was turned back from the north by the ice and cold.

Herrera, however, enters much more at length in his second volume upon the future career of Cabot, who we find assisting at the great council between the Spaniards and Por-

islandia sobre el cabo del Labrador, hasta ponerse en 68 grados, y porque por el mes de Julio avia grandes hielos, y haza mucho frio, no ozo passar mas adelante, dixo que los dios eran grandissimos, y casi sin noche, y las noches muy claras, por esta fualdad dio la buelta àzia Poniente, y rehaziendose en los Baccalaos, corrio la costa hasta 38 grados y de alli se bolvio à Ingalaterra, y este llevo mas noticia destas partes que ningun otro. Bretones y gentes de Dinamarca ha ido tambien à los Baccalaos y Jacques Cartici, Frances, fuè dos vezes con tres galéones." Book I. chap. xvi.

tuguese concerning the respective rights of those nations in the newly-discovered regions, as grand pilot; an office which gave him the controlling advice of the numerous Spanish voyages of discovery then projecting or making, and which led to his own second attempt to penetrate to the Pacific by the south. We find him then, in 1524, at the head of all the great navigators of the day assembled in conclave, his name being placed first in the list of cosmographers and navigators, "men capable of making sea charts, and expert in the globes, maps, astrolobes, and like convenient instruments."*

In 1525,† we find him solicited by several of the leading merchants of Seville to undertake the attempt to penetrate to India by the Straits of Magellan, and visit the Spice Islands, as well as to discover "Tharsis, Ophir, Oriental Cathay, and Cipango," and to load his vessels with "gold, silver, precious stones, pearls, drugs, spices, silks, brocades, and other valuable things."

Cabot met with the difficulties attendant

* Herrera, Decada Tercera, page 159. Book VI. chap. vi.

† Vide Decada Tercera, Libro IX. cap. iii. fol. 213.

upon all foreigners who presumed to have more knowledge than the native Spaniards, and which Columbus had so largely experienced; and when he had sailed at length, in the beginning of April, 1525, after encountering this storm of human passions, he touched at the Canaries, the Cape Verds, and at last reached Cape St. Augustine, and the Isle of Patos, and all Saints' Bay. Herrera observes here, that Sebastian Cabot did not conduct himself in this voyage as a seaman of experience,* or even as a thorough sea captain, for they wanted a sufficiency of provision and good government. Thus, in a state of dearth and mutiny, he worked up the Rio de la Plata, discovered the Island of St. Gabriel, where he anchored, and proceeded in boats for three leagues up a large river, which he named St. Salvador. Here he brought his vessels to, and unloaded them, built a fort, and proceeded to trace the stream.

At this place he remained after various

* Herrera states, in the Index, that he was a better cosmographer than seaman; but we have only to refer to the harassing life Columbus led with his Spanish employers and servants, to believe that poor Cabot was the victim of Spanish pride and jealousy.

unhappy adventures, for five years; at the expiration of which term he embarked in his largest vessel with the remainder of his men and his property, and returned in her to Spain, in 1531. He lost many of his companions in combats with the Indians, and built another fort on the river Larcarana, which was called "La Fortaleza Goboto, or Santespiritu."

Cabot arrived, in the spring of 1531, at the Spanish court, where he was not well received, as his severity towards the mutineers during his voyage had made him many enemies, from the same causes which Columbus experienced, who fell under the pride and envy of the Spaniards. He remained, however, as pilot-major, and continued in the Spanish service until the close of the reign of Henry VIII.; for, in the beginning of that of Edward VI., he was patronised by the Duke of Somerset, and presented by that nobleman to the king.*

In Hackluyt, is "A Copie of the Letters Patent of King Edward VI. to Sebastian Cabota, constituting him Grand Pilot of England, and grаunting him an Annuitie, or yeerly Revenue, of One Hundred Threescore and Six

* Strype, Memorials, vol. ii.

Pounds, thirteen Shillings, and four Pence. Witness, the King, at Westminster, 6th January, in the second Yeere of our Reign, 1549." And in this year, also, it is stated that the Emperor Charles I. requested Edward to send him to Spain again, as he was required there in his capacity of grand pilot, and could not be of much service to the English, who had not much recourse to, or possessions in, the Indies.

Edward appeared, however, to know his own interests, and Cabot his own value better, for he remained in high favour with the English monarch, and was his chief adviser in all mercantile and marine affairs, particularly in the very important matters with the merchants of the steelyard in 1550, who were foreigners settled in England, and so called, from steel being imported by them.

Cabot, who was now at the head of a body of merchant adventurers for the discovery of unknown regions, memorialized the king against the great privileges which had been granted to these strangers, and after a patient hearing before the Privy Council, obtained a decree, setting aside their pretension to be a legal corporation.

In 1553, we find him issuing* "ordinances, instructions and advertisements, of and for the direction of the intended voyage for Cathaye, compiled, made and delivered by the right worshipful M. Sebastian Cabota, Esq., Governor of the Mystery and Company of the Merchants-Adventurers, for the Discovery of Regions, Dominions, Islands, and places unknown, the 9th of May, in the year of our Lord, 1553, 7th Edward VI."

Cabot had now turned his attention to the discovery of a passage to China, by the north east, and hence, the voyage of Richard Chancellor, which is thus alluded to in Eden's curious black letter book (quoted already) under the head of—

"A discourse of dyuers vyages and wayes, by the whiche spices, precious stones, and golde, were brought in owlde time from India

* Hackluyt, folió 1589, page 1259; and in the same work, at page 253, we have the letter of Edward VI. to foreign potentates on the subject:—"Exemplar epistolæ seu litterarum missivarum quas illustrissimus princips Edvardus ejus nominis sextus, mitit ad principes septentrionalem ac orientalem mundi plagam inhabitantes juxta mare glaciale necnon Indiam Orientalem. Anno Domini 1553, regni suo septimo et ultimo."

into Europe, and other parte of the worlde; also, of the vyage to CATHAY, and East India, by the north sea; and of certayne seacretes touchynge the same vyage, declared by the Duke of Moscouie, his ambassadoure to an excellent lerned gentleman of Italie, named, Galeatius Butrigarius. Lykewyse of the vyages of that woorthy owlde man, Sebastiane Cabote, yet liuyinge in England, and at this present, the governor of the coompany of the marchantes of Cathay, in the citie of London.*

"And whereas, I haue before made mention howe Moscouia was in owr tyme discouered by Richard Chancellor, in his viage toward Cathai, by the direction and information of the sayde master Sebastian, who longe before had this secreate in his mynde. I shall not neede here to describe that viage, forasmuche as the same is largely and faythfully written in the Laten tonge, by that lerned yonge man, Clement Adams, scolemayster to the Queene's henshemen, as he receaued it at the mouthe of the sayde Richard Chanceler."

* Edition, in black letter, of 1555.

The advice and opinions of Cabot, supported as they were, by an enthusiastic determination to make his name famous to posterity, as the projector of the discovery of the long sought, and yet unknown passage, induced many persons of rank, wealth, and influence, to associate themselves, as the Company of Merchants Adventurers, above alluded to; and they finally obtained a Charter of incorporation from the king, with Cabot as governor for life.

In Hackluyt, the instructions issued by the governor, of which we have given the outline, are preserved at length, and it is said, they were read once a week to the crews of the three vessels which sailed soon afterwards. For his services, he was granted a pension of two hundred pounds a year,—a large sum in those days; and although many discrepancies exist in the history of the times, as to the facts of the first voyage, yet there remains no doubt that the one undertaken by Sir Hugh Willoughby resulted in the trade to Archangel, since extended so beneficially for the British empire.

It is not to our present purpose to examine the nature of the explorations in the North-

Eastern Icy Seas, which were so disastrous to the early navigators, and which, moreover, may be found in several collections of British voyages.

The Russian Company and its affairs, engrossed a large portion of the time and patience of its originator, Cabot; of whom, however, for want of contemporary biography, we gather but little more than that he went on, increasing in reputation and honour, to a good old age.

An anecdote occurs in Hackluyt, under the description of Stephen Burroughs's journal, which is worthy of record here, as developing the character of the man, and shewing, that like his rival Columbus, the increase of age and infirmities neither daunted his spirit, nor dimmed his visions of naval glory. "On the 26th of April 1556, when he was seventy-six years of age, he went on board the Search-Thrift, a small vessel, lying at Gravesend, bound to Russia, and bestowed upon the crew, right liberal reward, and dealt out alms to the poor of the place, beseeching their prayers for the prosperity of the undertaking."

Here he gave also an entertainment, at the sign of the St. Christopher, and "for very joy he had to see the forwardness of our intended

discovery," observes Burroughs, "he entered into the dance himself."

His patent was renewed shortly before his death, which, it is believed, occurred in 1557, or one year subsequently, at the age of seventy-seven.

Cabot observed the variation of the compass, as well as Columbus, but the prior claim of that great discovery, we firmly believe, rests with the latter.

The 24th day of June is still kept in Newfoundland, as the epoch of its discovery by Sebastian Cabot; and will, no doubt, hold a prominent place in the future processions and proceedings of the Natives' Society, established at St. John's, in 1840; and to the care, therefore, of that society we must now leave the future fame and recollection of one of the greatest navigators of England.

Most of the subsequent discoveries in, and voyages to, Newfoundland, are involved in some obscurity, and it is thus only requisite to trace some of the most interesting in this historical summary.

The voyages of Cortereal and Verrazani furnish very little light upon the subject.

Emmanuel of Portugal, in the year 1500, granted a general licence to Gaspar de Corte-real, to discover Baccalaos, which Cabot had coasted three years before. He visited, discovered, and named Conception Bay, and sailed along the shores of Baccalaos, as the coast of Northern America was then called. A short account is given by Francisco Lopez de Gomara, of his proceedings.

Osorio also gives another version. Gaspar perished in a second attempt, and his brother Michael, who endeavoured to trace his fate, in 1501, shared the same unhappy destiny; but in 1502, the Portuguese established the first regular fishery on these shores, and were followed by the Biscayans and the French. Conception Bay, Portugal Cove, etc., bear in their names evidences of these early enterprises of the Portuguese.

The voyage of Verrazani in 1523, on which the French laid their claim to Cape Breton, is equally vague; but in 1517 foreign nations took advantage of Cabot's discovery of the wealth of the ocean in these regions, and it is said that forty sail of Portuguese, French, and Spaniards were then engaged in the cod

fishery.* This roused the attention of England, and in the latter part of the reign of Henry VIII., feeble attempts appear to have been made at colonization.

In Hackluyt, the great source of information on these early English voyages, we find "An account of the voyage of two ships, whereof the one was called the 'Dominus Vobiscum,' set out on the 20th of May, in the year of our Lord 1527, for the discovery of the north parts of Newfoundland and Cape Britton." And in "Purchas," vol. iii., page 809, is copied from the same sources, a letter to King Henry, in the Haven of St. John, in Newfoundland, by John Rut, master of a ship, sent thither, and employed in fishing, 3rd August 1527;" probably the first authentic record of the present capital of the island.

In 1534, the celebrated navigator, Jacques Cartier, was entrusted, at the recommendation of Chabot, Admiral of France, with a commission to discover and colonize the northern parts of

* Hackluyt, vol. iii. p. 499. M'Pherson's Annals of Commerce, 4 vols. 4to, Edinburgh, 1806, vol. ii. p. 51. Memoir of Sebastian Cabot, pp. 52, 55. Polar Seas and Regions, p. 190. Cabinet Library, British America, 2nd vol. Edinburgh, 1839.

the New World. He arrived, with two small vessels of about twenty tons each, at Newfoundland on the 10th of May 1534, and touched at or near Cape Bonavista, thence proceeding along the eastern and southern coast of the island until he entered the Gulf of St. Lawrence, and discovered first the Bird Islets, then the Bay of Chaleur, which had been, however, previously visited by the Spaniards, and after exploring much of the great gulf he returned to France, and probably fancying that he had at length found the Meta Incognita, sailed on the following year and discovered Anticosti, Canada, and the St. Lawrence as far as Montreal.

Attempts were now seriously made by England to colonize Newfoundland, and in 1536, in the twenty-eighth year of Henry VIII.'s reign, "Master Robert Hore and divers other gentlemen" went for Newfoundland and Cape Breton. Hore and his companions suffered such great privations and fatigue that they failed in their design,* after being nearly

* Hackluyt, vol. iii. p. 129, 704, and Campbell's Lives of the Admirals, vol. i. p. 329. Henry VIII., moved at the miseries endured by these adventurers, pacified the French claim for indemnity by paying for the seized vessel, and promoting several who returned

starved to death, from which fate they were only relieved by seizing a French vessel laden with provisions. The French were more alive to the importance of the country in consequence of its proximity to Canada, and therefore, in January 1540, Francois de la Roque, Seigneur de Roberval, obtained a patent from Francis I., constituting him Lord of Norimbequa, or of nearly all the North American coasts, Viceroy and Lieut.-General of Canada, Hochelaga, Montreal; the Saguenay, Terre Neuve, or Newfoundland; Belle Isle, Carpon, now Quirpon, an island near Cape St. John; Labrador, the Bay of Chaleur, and Baccalao, the island and coast near and South of Bonavista.

This appointment, which so markedly includes the insignificant islet, or Bird Rock of Baccalao, tends unexpectedly to confirm the opinion that Cabot actually first discovered land at that point, or Bonavista.

Roberval sailed early in the summer of

from the voyage, which was made in the Trinity of 140 tons, and the Minion of less burden; there were in all one hundred and twenty persons intent on discovery in Newfoundland, but their provisions failed. Hackluyt had the particulars afterwards, from Mr. Butts, who was the only surviving person.

1540, with five ships, Jacques Cartier being his admiral, or chief commander. Some attempts were made to colonize and to examine Cape Breton, Newfoundland, and Labrador, but without much success, and the fact of the second being an island still remained unknown, and the subsequent voyage of Roberval upon an enlarged scale was so disastrous that the fate of this expedition has never been traced to this day.

We find, however, that the fishery on the banks of Newfoundland was at this early period (1540)* vigorously pursued; for in Hackluyt, p. 521, there is given an extract of "An Act against the exaction of Money, or any other thing, by any officer, for licence to Traffique in Ireland or Newfoundland, temp. An. 2 Edwardi sexti," and, in 1533, Cabot was urging the discovery of the northern passage to Cathay.

In 1576, Frobisher was driven by the ice to Newfoundland. Some of the natives came on board his ship, but sending them ashore in a boat with five sailors, neither the boat nor

* In 1540, the English first steadily pursued the Newfoundland fisheries, from the ports of London, Bristol, Biddeford, and Barnstaple chiefly.

men were ever seen again. He seized one of the Indians and took him to England, where he died soon afterwards.

In 1578, some new light appears to break upon the history of the island; for in Hackluyt, p. 674, we find a letter written to him by M. Antonie Parkhurst, gentleman, containing a report of the true state and commodities of Newfoundland. England had then fifty ships engaged in the fishery, and began seriously to consider the necessity of taking possession of the country, as in four years the vessels had increased from thirty to the above number; but England was still unable to contend with France and Spain, both those nations having each at least 150 sail, whilst the Portuguese had 50.

Piratical adventurers were also rife, and to such an extent did they carry their daring, that one named Easton commanded ten vessels of war, and soon afterwards levied black mail upon all engaged in the fisheries, impressed a hundred sailors for his fleet, and made his rendezvous at Ferryland.

We next find "Copies of the Letters in Latin and English, to the worshipfull Master Richard Hackluyt, at Oxford, in Christ Church,

Master of Arts, dated in Newfoundland, at St. John's Port, the sixt of August, 1583, giving an Account of that Island, and the Letters patent graunted by Her Majestie to Sir Humfrey Gilbert, of Compton, in the Countie of Devon, Knight, for inhabiting and planting of our People in America. Witnesse ourself, at Westminster, the xi day of June, the 20th yeare of our Reigne, 1579."

This patent gave rise to the expedition which followed it, and accordingly Hackluyt then gives "A True account of the late Discoveries, and possession taken in the right of the Crowne of England, of the New-found-land,* by that valiant and worthy gentleman, Sir Humfrey Gilbert, Knt., wherein is also briefly set downe her Highness a lawful Title thereunto, and the great and manifold commodities, etc. Written by Sir George Pecham, Kt., the chief adventurer and furtherer of the said voyage to Newfoundland, A.D. 1583, 25th Elizabeth."

This was the dawn of the future importance of the colony, and amongst the brilliant names engaged in fitting out the expedition under

* Hackluyt, p. 718.

the auspices of the maiden queen, shines forth Walter Raleigh, who undertook to establish settlements on all the coasts over which she claimed jurisdiction in the new world, from the discoveries of Cabot.

Elizabeth heaped dignities and viceregal powers upon Raleigh and Gilbert, and a prohibition was laid also upon any other adventurer; all being commanded not to approach, without the permission of Gilbert, within 200 leagues of any settlement he might form during the succeeding six years. He was created viceroy, admiral, and sole judge, the crown reserving only a fifth part of all the precious metals to be discovered.

Their first attempt was marred by jealousies of the inferior adventurers, and a misfortune which, though carefully kept out of sight in their annals, is believed to have arisen from an engagement at sea with a Spanish squadron, by which they lost one large vessel,* with Captain Morgan, an officer of great merit.

The fleet returned to England, and for some time inactivity prevailed again, Sir Walter Ra-

* See the Life of Sir Walter Raleigh. London, 8vo. 1740.

leigh being engaged in the Irish wars. Finding, however, that the term of the patent, which was for six years only, was shortening, he built a strong ship, named it after himself, and with his brother-in-law, Sir Humphrey Gilbert, fitted out a new fleet, consisting of five vessels, of which the Raleigh was the largest, and even that not more than 200 tons burthen.

Sir Walter was now vice-admiral under Gilbert, and sailed from Plymouth on the 11th of June, 1583. Raleigh was, however, to be spared from the fatal termination of this voyage, for soon after leaving Europe, a contagious disorder appeared on board the vessel he sailed in, which obliged him to return in great distress to Plymouth.

Sir Humphrey Gilbert arrived at St. John's, in Newfoundland, in the beginning of August, in the Delight, of 120 tons, having with him the Golden Hind, of 50 tons; the Swallow, also of 50 tons; and the Squirrel, a little barque of only 10 tons burthen, which separated from the fleet in a fog on the 20th of July.

In this squadron, feeble as it was, were 260 adventurers, amongst whom were some pirates, who had been condemned to service in the fleet,

and who were the cause of much after trouble. He enlisted also masons, carpenters, and blacksmiths, musicians, morris-dancers, hobby-horses, and every description of persons whose vocations were useful, or likely to attract the savages.

He made the coast on the 30th of July, and such was the extent of verdure at that season, adorned as the rocks were with berry-bearing plants and flowers, and well covered with forest, that the crews were delighted with their prospects. But Parmenius, the learned correspondent of Hackluyt, did not much approve of this wildness of nature, for he observes, "*My good Hackluyt, of the manner of this countrey what shall I say, when I see nothing but a very wildernesse.*"

The Swallow soon joined them, and her crew, chiefly composed of pirates, had, in the mean time, plundered a French vessel on the banks, stripped the crew of their clothing, and tortured them. Several of these miscreants were drowned, in returning in a small boat to their ship, and the others soon after met a deserved fate.

On the 5th of August, 1583, Sir Humphrey Gilbert took formal possession of Newfoundland, in the name of his sovereign mistress, and

received the acknowledged obedience of the crews of thirty-six ships of different nations, of which sixteen were English, in the harbour of St. John.

Here we first meet with the laws, by which the fishery was for a long time afterwards governed and regulated.

Sir Humphrey issued an ordinance proclaiming that a circuit of two hundred leagues around St. John's in every direction, was held by him in virtue of the powers invested in him, and demanded from all the strangers a formal presentation of wood and water, in token of possession for himself, his heirs, and assigns for ever.

The English laws, constitution, and church government were established, whilst it was made penal for anybody to attempt anything prejudicial to the newly acquired dominion; and, amongst other enactments, it was declared, that any person uttering words "to the dishonour of her majesty" should lose his ears. The viceroy also levied contributions on all the fishing vessels, which were complied with the more readily as the discovery ships were well armed, and the others were not.

Sir Humphrey had, however, a most trouble-

some task. Several of his people, disgusted with the country and the prospect of wintering there, deserted in all directions, seizing the fishing vessels, and turning their crews ashore, and even laid a plot to seize the whole fleet.

The Squirrel having made another port of the neighbouring coast, and the sick having become numerous, the admiral sent home the Swallow, in which he embarked all those who were suffering from disease, and without taking any further steps towards colonizing Newfoundland, sailed on the 20th August, steering for Sable Island, which had been appointed as a rendezvous, very unpropitiously.

Ignorant of the dangers of the navigation, after leaving Cape Race, and meeting stormy weather on the 29th, the Delight struck on a shoal and became a wreck; and for six days, sixteen of the crew were tempest-tossed in a little boat, and the remainder, refusing to quit their vessel, doubtless perished in her. This boat, without water or provision, made the coast of Newfoundland again; and the crew, after living on berries in the woods, were taken to Passages, in Spain, by a Biscayan fisherman.

Sir Humphrey Gilbert, who had been surveying the coast in the little Squirrel, soon learned his mishap, from those of the Delight who had escaped.

He now made preparations for crossing the ocean, and was urged to quit the nut-shell in which he had embarked, and go on board the Golden Hind. His reply is characteristic of the brother-in-law of Raleigh—"I will not forsake my little company, with whom I have passed so many storms and perils."

They reached the parallel of the Azores in safety, but there encountered a storm of so terrible a nature that it quailed their hearts, Sir Humphrey alone retaining his self-possession. The Golden Hind kept as near the little Squirrel and her brave admiral as the perilous mountains of waters would permit, and the crew, with dismay, saw him sitting and calmly reading on the deck, and heard him bid them be of cheer, for said he, "We are as near to heaven by sea as by land."

At night, the blackness of darkness fell upon the ocean; the lights in the Squirrel suddenly disappeared, and this is all that will ever be chronicled of the fate of one of the bravest of the adventurers who sought in the glorious

reign of Elizabeth to extend the Dominion of England in the western world.*

Of all the armament, the Golden Hind alone returned, and she was a mere wreck; and Captain Hayes wrote an account of the discovery, which is given in No. 7 of the Appendix to this work.

Disastrous as were these results, the spirit of Raleigh and Pecham rose superior to them. The latter had liberally contributed to the adventure, and now wrote a treatise on colonization in the new world, stimulating the spirit of the nation to fresh attempts. Captain Carlile also memorialized the Muscovy Company, and obtained its approval of a new expedition, which, however, did not take effect.

* Hackluyt, p. 679, "A report of the voyage and successe thereof, attempted in the yeare of our Lord 1583, by Sir Humfrey Gilbert, knight, with other gentlemen assisting him in that action, intended to discover and to plant Christian inhabitants in places convenient, upon those large and ample countries extending northward from the Cape of Florida, not in the actual possession of any Christian prince. Written by Mr. Edward Haies, gentleman, and principal actor in the same voyages, who alone continued unto the end; and by heaven's special assistance returned home with his retinue, safe and sound."

Sir Walter Raleigh then broached the subject of examining the continent of America in a milder latitude, and Newfoundland was long neglected for the El Dorado vision—a vision glorious in its conception, and which has since peopled North America with the Anglo-Saxon race.

Less-distinguished names must now be cited, as containing the almost abandoned project of colonizing Newfoundland; and we shall, before we notice these attempts, mention the voyage of Henry Hudson towards Nova Zembla, as given by Purchas, vol. iii. p. 581.

This voyage of Hudson was his third, for the discovery of the unknown straits, and, on his return he passed "from Farre Islands to Newfoundland, and along to fourty-four degrees ten minutes, and thence to Cape Cod, and so to 33 degrees, etc., in 1609." The account of this visit to Newfoundland, in Purchas, was written by Robert Ives, of Limehouse, in the seventh of James I.; and was followed, in 1610, by a "Patent for Newfoundland, and the Plantation thereof made by the English, 1610; delivered in a letter dated thence from M. Guy to M. Slaney; treating, also, of the Weather the three first Winters, and of Cap-

tain Weston, with other remarkable Occurrents."

This expedition was upon a large scale, and was promoted by Mr. Guy, a Bristol merchant, who published several pamphlets, and obtained the patronage and assistance of the celebrated Sir Francis Bacon, Lord Northampton, and Sir Francis Tanfield, to whom, with forty associates, a patent was then granted, styling them, "The Treasurer and Company of Adventurers and Planters of the Citie of London and Bristol, for the Colony and Plantation of Newfoundland."

Their territory was declared to reach from Cape Bonavista to Cape St. Mary, and they were even invested with the royal rights of the precious metals, and the entire property of the land, soil, and mines, with vice-regal powers of the most extended nature; and, in short, the only important reservation was that the fisheries should be open to all British subjects, but all the seas and islands within ten miles of the coast, from N. L. 46 degrees to 52 degrees, were declared to be in their dominion.

It is most interesting to trace this adventure. Mr. Guy sailed from Bristol, 1610, with three ships and thirty-nine persons, as

Governor. He settled his little colony at Mosquito Cove, in Conception Bay, and built a dwelling and storehouse, with a fortified enclosure of 120 feet, by 90, in which he mounted three cannons, and remained there for two years, during which time he gained the esteem of the Red Indians.

His letter to his friend, Mr. Slaney, already quoted, contains, amongst other interesting matter, an account of the climate, which he describes as not so cold as that of England; that the rivulets had not been frozen during the depths of winter, and that, unless for about a fortnight during that season, the settlers could travel to great distances.

Guy left his colony in charge of William Colston, who also describes the country, but not so favourably, as six of the settlers died out of twenty-five, who had been seized with scurvy.

Guy went back in the summer of 1612, and by his activity soon arranged matters, and the sick had recovered, by using turnips.*

* This is the first agricultural notice of the capability of the soil, which is well fitted for the cultivation of that root.

He undertook a survey of the coast, and met with two canoes of the Red Indians; but after this adventure, we hear little more of him, as he abandoned his design, and the settlement, wanting his presence, soon languished.

CHAPTER II.

HISTORY FROM FIRST ATTEMPT AT SETTLEMENT DOWN TO 1842.

WE now approach more lucid ground, having before us a copy of "A DISCOURSE AND DISCOVERY OF NEVV-FOUND-LAND, with many reasons to proove how worthy and beneficiall a plantation may there be made after a far better manner than now it is. Together with the laying open of certaine enormities and abuses committed by some that trade to that countrey, and the meanes laid downe for reformation thereof. Written by Captaine Richard Whitbourne, of Exmouth, in the county of Deuon, and published by authority. As also an imitation, and likewise certaine letters from that countrey, which are printed in the latter part of this booke. Imprinted by Felix Kingston, 1622." Small 4to; and dedicated to James I.

Few histories have been so cut up as this precious remnant of that of Newfoundland, and in my opinion great injustice has been done to it, inasmuch as, being now a very scarce work, most of its critics have taken a great deal upon credit. It shall, however, speak for itself; its importance being manifest, as taking the lead of all the treatises upon the country, it being the first complete one extant.

King James thought so highly of it that he issued the following order in Council, at Theobalds, on the 12th of April, 1622: "With the copy of a Reference made from the King's Most Excellent Majestie, for recommending Captain Whitbourne's Discourse concerning Newfoundland, so as the same may be distributed to the several parishes of this kingdom, for the encouragement of adventurers unto plantation there. As also a letter from the Right Honourable the Lords of the Council to the Most Reverened Fathers the Lords Archbishops of Canterbury and Yorke. Dat. Whitehall, the last day of June, 1622, with a list of the names of some who have undertaken to helpe and advance his Majestie's plantation in the New-found-land: with extracts of certain letters written from the Governor, Capt Ed-

ward Winne to Sir George Calvert, his Majestie's Secretary of State, and others, in this yeare 1622." 4to. 1622; and in Purchas, vol. v., p. 1189.

Whitbourne appears to have been a most persevering and painstaking mariner, and, according to his own statement, had been thoroughly initiated into the mysteries of his craft. He was employed in a ship of his own against the Spanish Armada in 1588, and as early as 1578, he had been in Trinity Harbour, Newfoundland, where he obtained peltry and fish in great quantities.

In 1583, Whitbourne describes his meeting with Sir Humphrey Gilbert at St. John's, this being on the second voyage to Newfoundland of Whitbourne. He made a third in 1585, and then met in the same harbour with Sir Bernard Drake, who had been sent from England with a fleet and commission from Queen Elizabeth, to assert her Sovereignty, which he effectually did by seizing several Portuguese vessels, and carrying them home as prizes, with their cargoes of train oil.

In short, Whitbourne appears to have been almost yearly employed in the trade, and after mentioning his encounter with the buccaneer

Easton, in 1612, he relates an interview with Sir Henry Mainwaring and his fleet, in 1614, to whom he appears to have been very useful.

It was at this period that England seems to have awakened from the trance into which she had fallen respecting the importance of colonization in the New World, to which Sir Humfrey Gilbert had so gallantly led the way.

In 1615, Whitbourne was sent to Newfoundland with a commission from the Admiralty of England, to establish order among the boisterous fishermen, and to correct the great abuses which then subsisted among them. One hundred and seventy masters of vessels submitted their grievances to his jurisdiction, and he made an attempt to empannel juries in the harbours most frequented. This may be considered as the dawn of colonization, and renders Newfoundland, independently of the previous discovery, the oldest acknowledged colony of Britain in the western world.

In 1618, Whitbourne, to whom Newfoundland is so deeply indebted, again visited it, to increase a small colony of which he was made Governor, which had been sent out by Doctor Vaughan, a Welsh gentleman, in 1616, who had purchased part of Lord Northampton's

patent. This settlement was called Cambriol, and was on that part of the south coast, now named Little Britain, and was expressly planned on such a scale as to make agricultural pursuits and the fishery mutually depend upon each other.

He appears to have returned home in 1622, and wrote the book we have quoted to induce settlement; and upon a careful perusal of that part of the work of which he is the author, there seems to be nothing but what may be fully borne out by present experience. It will be quoted hereafter.

The next great attempt at colonization was that undertaken by order of the Secretary of State to James I., Sir George Calvert, a Roman Catholic, who was afterwards Lord Baltimore, and whose latter title has been perpetuated in the settlement of Maryland.

Sir George, in order to enjoy the unshackled exercise of his religion, obtained a grant of the tract* of the south-eastern coast of Newfoundland, lying between the Bay of Bulls,† or, as some accounts say, between Trinity Bay, and

* Anderson on Commerce, vol. i. page 495.

† A corruption of the French words, "Baie des Boules."

Cape St. Mary's, or the Bay of Placentia,* thus embracing the whole peninsula of Avalon, in absolute proprietorship.

It is well known that at this epoch crowds of pilgrims, of sects and of creeds differing from the Church of England, were pouring across the Atlantic, and the resting-place for the Roman Catholic persecuted was chosen at Ferryland, and his grant was styled Avalon, from the ancient name of Glastonbury, where Christianity was first preached in Britain. This name has since extended to the whole peninsula between Conception Bay and the Bay of Placentia. About the same time, Carey, Viscount Falkland, then Lord Lieutenant of Ireland, established another colony.

Lord Baltimore resided at Ferryland† for

* In 1622, the ship which Sir William Alexander sent to colonize Acadia, or Nova Scotia, wintered in Newfoundland, but returned disappointed, after visiting a few harbours in Nova Scotia.

† This is called Foriland by Whitbourne, and may be a corruption of Fore Island, which is appliable to the locality. It is, however, written Ferryland in the first letter from the governor to Sir George Calvert, dated July, 1622, which is appended to Whitbourne's book, and contains extravagances, from which that author's reputation has suffered.

several years, and built a large house and a strong fort on the Isle aux Bois; but having obtained another large grant of Maryland, he, after revisiting England, finally settled there, and thence arose the now important city of Baltimore.

We find little subsequently to this period, in the early annals, to interest the reader respecting the colonists in Newfoundland, excepting that in twenty years afterwards it was computed that 350 families were settled in different harbours, and that the fishery had grown to vast importance: so much so indeed that even so early as 1626, one hundred and fifty vessels were dispatched from Devonshire alone, and England began to monopolize the trade of Spain and Italy. But the pirates or buccaneers and the French fishermen were very numerous, and the former harassed the trade very grievously, whilst the latter began to rival us in the successful pursuit of the cod.

The year 1633 is celebrated for a code of regulations drawn up for the government of the fisheries.*

* Charles I., through the Star Chamber, directed these regulations to be carried into effect; and, amongst other orders, noticed subsequently in the text, esta-

In 1635, the eleventh of Charles I., permission was granted to the French to cure and dry fish in Newfoundland, upon condition of payment of a duty of five per cent on the produce, which was continued for forty-one years; and, in 1660, this enterprising people founded a colony in Plaisance, or Placentia Bay, which they afterwards long occupied,* and it was admirably chosen, but which England has since most unaccountably overlooked.

In 1663 the British fishery was first encouraged by an entire exemption from tax or toll.

It will now be necessary to break the thread of the narrative a little, in order to trace the successive steps towards the settlement of law and government.

The colonists found the inefficacy of the

blished the fishing admirals,—the skipper, or master, of that fishing vessel which first arrived at a station being thereby made judge, or vice-admiral, for the season, whence have arisen the terms "Admiral's beach," Admiral, and Vice-admiral, on different parts of the coasts of Newfoundland. The power of those generally illiterate men was very great, and very greatly abused, and was of course not very long tolerated.

* McPherson, vol. ii., pp. 338, 389, 401.

system of juries attempted by Whitbourne, and were disgusted at the tricks and chicanery of the fishing admirals, who were first formally appointed by the rules of the Star Chamber, in 1633; whilst four different and clashing charters had been also granted, in 1578 or 1583 to Sir Humphrey Gilbert; in 1610, to Lord Northampton and others; in about 1622, to Sir George Calvert; and in 1628 another to the Marquis of Hamilton, Sir David Kirk, and others, under pretence that Lord Baltimore had deserted his settlement; and this last charter had the extraordinary clause added to it, that no person should presume to plant or inhabit within six miles of the sea shore between Capes Race and Bonavista.

These discouraging and afflicting circumstances naturally required a remedy, but the rules of the Star Chamber, in 1633, provided a bad one; for that arbitrary tribunal enacted, that if a person in Newfoundland killed another, or stole to the value of forty shillings, the offender was to be sent to England, and placed under the power of the earl marshal, who could order execution upon the testimony of two witnesses.

The Star Chamber also enacted, that no ballast was to be thrown overboard in the harbours; that no person was to spoil or to deface any stage, cook-room, or other building; that the fishing ship first entering a harbour was to be admiral therein, and the master to decide all complaints. Penalties were also named for frauds, for setting fire to the woods, hindering the fishery, selling strong liquors and tobacco, non-attendance on service on Sundays, etc.

The mayors of Southampton, Weymouth, and other trading ports, were to notice all complaints made against those who evaded the laws by land, and the vice-admirals of Devonshire, Cornwall, Southampton, and Dorset, were competent to try those who offended on the high seas. The fishing-admirals in each harbour were to proclaim these laws, and theirs were the courts of first instance; whilst the merchants and shipowners engaged in the trade to Newfoundland, in England, strenuously opposed the appointment of any civil permanent magistrates, or of any governor of the island; and their prayer was granted by the Privy Council.

In 1634, a fifth charter was granted by

the Star Chamber to "the merchants and traders of Newfoundland."

In 1635, the council issued a commission to John Treworgay, a merchant, then in Newfoundland, to "order affairs there for the best advantage of the state," which was re-issued in 1650; and another was granted, in 1655, to Sir David Kirk.

In 1660, Lord Baltimore obtained repossession of the province of Avalon; and, in the same year, there was a renewal of the merchants' charter granted in 1634, in which a clause was added, to the effect that no master or owner of any ships should send any settlers to Newfoundland.

It now became, in short, a struggle between the fishing-merchant and the employed, between those desirous of permanent settlement and those desirous to discourage it, in order to keep the fisheries intact; and it would be an endless task to follow, for many years, the squabbles and disputes for power which arose, and the government of Charles I. was too actively engaged at home in more important quarrels to take much notice of them.

Notwithstanding, however, the severe difficulties which those who wished to colonize New-

foundland laboured in during that reign, during the disturbed but vigorous administration of the interregnum, and in the more peaceful rule of Charles II., the settlements increased, in spite of the fierce rivalry between France and England for possession of this El Dorado of the sea.

We have seen that there were near four hundred English families located in Newfoundland as early as 1654; and that, in 1663, the fisheries were exempted from tax or toll. In the long interval which elapsed between the first struggle of the residents for law and equity, in 1633,* down to 1728, when a

* I shall merely advert to the state of the country from 1670 to 1676, owing to a statement of Sir Josiah Child, the principal merchant connected with the fisheries in England, who published a pamphlet to prove that the cod fishery had declined since 1605, when he stated it employed 205 ships, down to eighty, in consequence of the resident population employing boats along the coast, and he urged that if the inhabitants were permitted to multiply, they could carry on the whole fishery, and the nursery of seamen be destroyed. He therefore very coolly proposed the remedy of displanting, or in other words, forcibly preventing settlement. The Lords of Trade and Plantation accordingly obtained an order that the whole

governor was at length appointed, the island underwent many convulsions, and we shall therefore resume the thread of the narrative, and the order of time, to briefly relate them; premising, that during the whole of the period above noticed, or for nearly ninety years, misrule reared its head, and society was in a wretched condition, owing to the constant animosity between the merchant adventurers and the settlers; the latter being held still more in check by the absurd policy of the parent state, in discountenancing settlement by every means in its power.

The struggle was not, however, be it remembered, so much of a political nature, as it was one of mere personal interests, and it arose chiefly from the unlimited discretionary licence of the illiterate masters of vessels, and from the constant desire of the resident population

colony should be rooted out, and the land reduced to a desert. Fortunately, a humane naval officer, Sir John Berry, was deputed to burn the houses and drive out the settlers; and although he reluctantly executed his orders, he remonstrated against their severity, and in 1676, Mr. John Downing, a resident, procured an order from the king to annul it.

to appropriate the best *ships' rooms*, as the places for packing and drying the fish in the harbours were then and are still called.*

Thus we have a long, uninteresting space, filled with quarrel and complaint, from the period at which we left off our chronological arrangement of detail, in 1663, down to 1692, when an important event in the history of the island occurred, by Commodore Williams being sent with a force against Placentia, which he partially destroyed.

A French fleet, in 1696, twice attacked, and finally destroyed, the village of St. John's;

* Although Mr. Downing succeeded in annulling the cruel order obtained through Sir J. Child's influence, yet he could not prevent the discouragement to settlement; for, at the same time, it was expressly directed that no fishing vessel was to be permitted to take out emigrants, and all persons were forbidden to settle. Complaints constantly assailed the government, that these laws were evaded, but in consequence of the remonstrance of Sir John Berry and others, no further rigorous measures were now resorted to, and it appears that, in 1697, the Board of Trade recommended that one thousand persons might be permitted to remain, to construct boats, stages for drying the fish, &c. —Montgomery Martin's British Colonies. Mc Gregor's British America, vol. i., p. 158.

and all the British settlements were visited by Iberville, the French commander, with fire and sword, excepting those in Bonavista and Conception Bays—viz., at Bonavista and Carbonier, where the British settlers resisted him successfully; whilst an English frigate, in the Bay of Bulls, was captured by his fleet.

War now raged, with all its horrors, in this devoted island; and the governments of England and of France seemed both determined to fight to the uttermost for supremacy respecting its possession.

A strong naval armament, with fifteen hundred soldiers on board, under Admiral Neville and Sir John Gibson, appeared off Newfoundland, but, owing to the indecision of the commanders, effected nothing; nor was the contest decided between the rival nations until the peace of Ryswick, in 1698, which restored all the possessions of each power. Some attempts were now made to modify the jurisdiction of the fishing-admirals, by adding rear and vice-admirals—or, in other words, the masters of the second and third fishing vessels which arrived at a station—to the courts of almost plenary power hitherto held by the

former—a method of getting rid of a difficulty which made the original grievance ten times worse than it was before.

Peace, either in the fishing harbours of the island, or in the greater world beyond the Atlantic, was not of long duration. The French had gradually and wisely extended their colonies in Newfoundland, had seized important positions, and were therefore better prepared for aggression than their neighbours, amongst whom settlement was still as much discouraged as ever; and England, instead of having a hardy native island population to resist or overwhelm their ambitious and restless neighbours, had to depend on the occasional presence of ships of war.

In 1702, the famous "war of the succession" broke out in all its fury, and Queen Anne immediately despatched a fleet to Newfoundland, under Sir John Leake, who gained repossession of great part of the island, and captured nine and twenty French vessels; and he returned to England with his prizes before the winter set in. Admiral Graydon was sent with a fresh fleet, in 1703, but returned without effecting his orders.

The French, however, nothing daunted, re-

inforced their already strong port at Placentia, in 1705,* by five hundred troops from Canada, attacked our settlements very successfully, and attempted to become sole masters of the island, by attacking the fortified harbour of St. John's, in which they were, however, unable to effect much, although their preparations were well conducted and formidable; but they spread desolation as far north as Bonavista.

In 1706, the British again expelled them from their recent conquests, and many of their men of war and fishing vessels were captured.

St. Ovide, the enterprising commander of the French forces, surprised St. John's, in 1708, and destroyed it; whilst he also conquered at every British fishing station excepting Carbonier, which, as usual, was gallantly defended by the fishermen. An expedition

* This year is remarkable for being that in which the first resident clergyman, or missionary of the Church of England arrived in Newfoundland, with the pittance of £50 for his support, and stations to visit, frequently 200 miles apart. His name was Jackson, and he was sent out with many others, who proceeded to different stations in North America, by the Society for the Propagation of the Gospel in Foreign Parts, which had been incorporated by King William, in 1701.

was fitted out, under the orders of Captain Martin and of Colonel Nicholson, to dispossess the French under St. Ovide, but it failed in its main objects; and for the eight following years, owing to the magnitude and interest of the war on the Continent of Europe, England was unable effectually to turn its attention to the affairs of Newfoundland. And thus, until the peace of Utrecht, in 1713, the island was torn and harassed by petty warfare and depredation, being sometimes in possession of one power, sometimes in that of the other.

England and France were so impressed with the vast importance of this island and its fisheries, both as regards the inexhaustible wealth of its adjacent seas, and also its being the key to unlock or close the access to the Canadas, that strenuous exertions were made by both powers to assert their rights; and it was then thought that the very existence of the British navy depended upon the school for her seamen which the bank fishing afforded.

By this celebrated treaty, Newfoundland and the adjacent islands were declared to belong, in exclusive sovereignty, to Great Britain; and such was the renown of her splendid achievements, that she might, but for

generosity, have exclusively maintained that sovereignty. Unfortunately, however, liberty was granted to the French fishermen to catch and dry fish on the coast lying between Cape Bonavista, on the eastern side, and Pointe Riche, on the western; or, on two-thirds of the eastern shores, the whole of the northern, and one-third of the western in the Gulf of St. Lawrence. They were, however, not to build or to settle.

The vigorous war in which England had been engaged, and the necessity of overlooking the harsh laws against the British residents, in consequence of their usefulness experienced during the French aggressions, had increased the population of Newfoundland very greatly during this troubled period, and colonization was already making rapid strides under every disadvantage, whilst the fisheries were carried on very briskly after the peace, by both French and English.

In 1721, the French had 400 ships employed, and after supplying France with fish, rivalled us in the Mediterranean and in Spanish ports.

The island was now under the nominal administration of the Governor of Nova Scotia;

and still so vexatious were the delegated powers of justice, that continued representations were sent home for establishing it as a separate colony of Great Britain.

Fortunately for the inhabitants, the naval officer who commanded on the station, and was then, and has been since his time, for more than a century afterwards, the real Governor of Newfoundland, saw the gross abuses which existed, and aided by his reports, the island was separated from its mere nominal dependence upon the distant sister colony; and it was agreed to yield to the prayers of the settlers, by the appointment, from home, of a civil governor.

Lord Vere Beauclerk, the naval commander above alluded to, obtained the appointment in 1728, of this, the first governor of Newfoundland, not, however, for himself, but for a naval officer, Captain Henry Osborne, of H. M. S. Squirrel, whose qualifications for the office must have been considered very great, as the original intention had been to appoint Lord Beauclerk, to whom, after all, Captain Osborne was so far responsible, that his lordship, for a short time, was actually, as the merry sailor in the Tempest says, "Viceroy over him."

The fact was, that Lord Beauclerk must have vacated his seat in parliament by accepting the government, and he therefore selected an officer in whose discretion he could confide, and whose talents he considered, perhaps, quite equal to those of the lawyers who were originally named as best fitted to advise him; whilst the well-known dislike of a sailor to the gentlemen of the long-robe, perhaps, was a powerful inducement to his preference for a sea captain, instead of a land lawyer, as his deputy. Be that, however, as it may, Captain Henry Osborne must have been a person of no common talents, as he afterwards obtained the thanks of the House of Commons, and a pension of 1200*l.* a-year during his life.

Captain Osborne earned this reward; for his was no bed of roses during the whole period of his government, although, as was the case, for many years afterwards the governor passed his winter in England. His commission required him to obey such instructions as Lord Vere Beauclerk should propose to him for his Majesty's service, and yet it appointed him Governor and Commander-in-Chief in and over the island of Newfoundland, the fort and garrison of Placentia, and all other forts and

garrisons, erected, or to be erected, in the said island; it also gave him authority to administer the oaths to government officers and others, to appoint justices of the peace, and the other necessary ministers of justice; whilst, at the same time, it completely tied his hands, by stating that he was to do nothing contrary to the statute of 10 and 11 William III., nor obstruct the powers therein given to the fishing admirals, or captains of men-of-war; and even the justices he was to nominate were required to aid and assist the commodore on the station, the commanders of the king's ship, and the fishing admirals, in putting into execution that rigorous statute. He was empowered, however, to build a prison and court-house, and all civil and military officers were to aid and assist him.

The Deputy-Governorship of Placentia, which had been a separate command under Nova-Scotia ever since that place was taken from the French, was now also declared to be under Captain Osborne's jurisdiction, and in case of his death, his successor was to be Lord Vere Beauclerk's first lieutenant in the Oxford.

Captain Osborne sailed with Lord Vere,

carrying with him several copies of "Shaw's Practical Justice of the Peace,"* and other documents relating to the trade of Newfoundland, early in the summer of 1729.

To shew the difficulties under which the settlement groaned, and which the governor had to encounter, as well as to render this abstract of the History of Newfoundland more clear, it will be necessary now to inform the reader, in a concise manner, of what the statute of 10 and 11 William III. consisted, a statute intended to set all the disputes which had disquieted the island heretofore at rest; and also to state that Lord Beauclerk had a separate set of instructions, fifty in number, in which all the heads of inquiry relating to the trade and fisheries, and the abuses and grievances so long complained of, both by merchants and residents, were enumerated.

This celebrated statute was entitled, "An

* The most important settlements in the island seem then to have been, as appeared on the covers of eleven of these books in golden letters—Placentia, St. John's, Carbonier, Bay of Bulls, St. Mary's, Trepassey, Ferryland, Bay de Verd, Trinity Bay, Bonavista, and Old Parlekin, in Newfoundland, for each of which one copy, and of course, one justice, or more, of the peace was intended.

Act to encourage the trade to Newfoundland," and it certainly answered that purpose as far as the fishing and provision merchants were concerned, whilst it repealed none of the disabilities under which the poor residents laboured; nor did it even annul that Star-Chamber provision, which forbade wood to be cut within six miles of the shores of the island.

This statute, however, had some sterling merits: its first section made it lawful for all the king's subjects freely to fish in or about Newfoundland, and forbade any alien or stranger to bait lines or to catch fish there.

The second, ordered that no ballast should be thrown overboard in the harbours, but carried on shore wherever it might not be of annoyance.

The third, forbade the destruction of fishing stages and cooking rooms.

The fourth, reinstated the fishing admirals in their strange and unlimited powers, adding rear and vice-admirals, and pointed out how they were to settle the fishing-rooms or drying-places for all after comers.

The fifth ordered that all residents who had possessed themselves of stages, drying-places, cook-rooms, etc., since 1685, should

give them up to the jurisdiction of the fishing admirals.

The sixth, in like manner, prohibited any inhabitant of Newfoundland from possessing such places until the ships of the fishery were first provided.

The seventh, was a proviso that these poor inhabitant fishermen might retain such houses, stages, or cook-rooms as they had built, cut out, or erected since the 25th of March, 1685, or might hereafter make, if the localities had never been claimed since the said period by fishing ships.

The eighth annulled this proviso most effectually, for it declared that no bye-boat keeper* should pretend to meddle with any such places as belonged to fishing ships since 1685, or which might belong after the 25th March, 1700.

The ninth, obliged every bye-boat keeper to employ two fresh men out of every six of which the crew of the boat was to be composed, and every inhabitant was also forced to employ two such men; whilst the masters of ships were

* Bye-boat keepers were persons who went out to Newfoundland to keep boats for a fishing voyage.

to employ one in every five of their crews; one of these men to have previously made only one voyage, and the other never at sea before.

The tenth section obliged the fifth man in every fishing vessel to be a green hand, or one who had never been at sea. The object of these restrictions was to prevent the settlers from following the fishery as much as possible.

The eleventh forbade the obliteration of marks on boats or train-oil vats, without the owners' consent.

The twelfth forbade any standing trees to be barked, or the woods purposely set on fire or destroyed, excepting for necessary fuel; and fishing-nets or seines being wilfully injured, or baits stolen.

The thirteenth annulled the jurisdiction of the Lord High Constable and Earl Marshal of England over felonies committed in Newfoundland, and ordered that all capital crimes committed there should be tried in any shire or county in England by commission of oyer and terminer.

The fourteenth ordered the fishing admirals to see these rules executed, to keep a journal, and to deliver a copy of it to the privy council yearly.

The fifteenth gave increased power to these admirals to determine differences arising between fishing masters and the inhabitants—the party aggrieved to apply to the commanders of H. M.'s ships of war for relief.

The sixteenth directs the due observance of Sunday, and forbids the sale of liquors, etc., thereon.

The seventeenth declares, that no duties are to be levied on whale fins, blubber, and oil taken in Newfoundland.

Such is the celebrated act of parliament which the first civil governor of Newfoundland had to contend with, and which embarrassed almost all his successors. The consequences must be obvious: the rude, unlettered, and frequently tyrannical masters of the fishing ships set the governor and his justices of the peace at defiance, and treated the latter with absolute scorn. But still, such was the character of the population, as well as of the fishermen, that under all these disadvantages, owing to the total exclusion of foreign competition, trade flourished and settlement increased.

The governor built his jail and court-house, held his courts of record according to the English laws, and determined, as far as he was

able, matters in dispute between parties which did not extend to capital offences.

Soon afterwards, however, a man named Goss, at Torbay, a considerable fishing village, about seven miles from St. John's, was killed in an affray by another of the name of Blackmore, and he, with another man named Steel, who had also committed murder, was sent to England for trial. The former were acquitted, the latter condemned, but such was proved to be the risk and expense of bringing home witnesses, that a commission was at last issued, as we shall see, in 1737, for a "Court of Oyer and Terminer" to be established, to try offenders for capital crimes in the island.

Captain Osborne was indefatigable in his exertions for the benefit of the colony. He divided the inhabited parts of the island into convenient districts, levied a rate of half a quintal of fish on all boats and boats' rooms, for the purposes of erecting a jail, stocks, etc. But his authority, ample as that of a naval officer of the old school was, and backed by the influence of Lord Vere, was secretly undermined, and the government at home soon had to regret that the advice of the Board of Trade had not been adopted, by bringing a bill

before parliament to correct all the real abuses subsisting in Newfoundland.

The fishing adventurers founded their opposition to the new governor and his justices, upon the plea that they derived their authority, not from an act of parliament, but only from the king in council; and such was the absurd degree of importance they attached to this far-fetched subterfuge, that it proved too strong for the united efforts of Captain Osborne and his powerful supporters.

The governor, in levying the tax before mentioned, to build a jail at St. John's, and another at Ferryland, and in appointing justices of the peace and constables, had aimed the first blow at the power of the adventurers and fishing captains. He also did many acts of justice to the inhabitants, who had been so sorely oppressed; and at Placentia he restored several properties of which Colonel Gledhill, the military lieutenant-governor there, had deprived the residents.

For all these hitherto unheard-of acts, the governor was assailed by a storm of invective, and an attempt to place him in difficulty by legal measures; so that upon his return in the winter months, to England, he, (with Lord

Beauclerk,) was obliged to seek the advice of the attorney-general, in order to protect himself from serious pecuniary consequences. The opinion of that officer of the crown was delivered on the 27th of April 1730, and was almost fatal to any future hopes of the due exercise of the governor's functions, as it declared that the levying of rates upon the property of the adventurers, in their fishing-boats or fish, was illegal; and that if any rate was necessary, it was questionable whether it could be levied at all without the presentment of a grand jury, and then only upon the inhabitants; whilst by the statute of 10 and 11 William III., the fishery at Newfoundland was declared a free trade, and that justices of the peace there could only decide upon questions of a criminal nature, and not upon those of property.

The opinion of another eminent lawyer was also obtained, which, whilst it also declared the illegality of raising taxes for any purposes in Newfoundland, supported the governor's authority, in demanding tribute for building a jail, and declared that as Captain Osborne had acted with so much temper and caution throughout, and that as the persons concerned

had not refused to obey him, he would be subject to no prosecution in England, and recommended that the governor should continue to levy the rate, as his office and commission would be nugatory unless the prisons were erected.

In September 1730, after the governor had returned to the island, we find him complaining bitterly that the justices he had created were opposed to him to the uttermost, and that his own power was trenched upon most determinedly by the fishing admirals. "Indeed," says he, in his report, "I find that by their will, they would be sole rulers, and have nobody to control them in their arbitrary proceedings." He expostulated with them, but it seemed to serve no other purpose than to raise their resentment against him, as the abettor of the justices. He could not charge the justices with having taken any arbitrary steps; their fault was rather the contrary, whereas the admirals were guilty of many.

"The commission of the peace was in general disliked by all the masters of ships, who were the chief people that opposed most of the steps the governor had taken; for which reason, and partly from the indifference of some of the

justices in their offices, who thought they suffered in their way of trade, and got the ill-will of the people they dealt with, and partly from the incapacity of others, the commissions of the peace were but indifferently executed. However, the governor, notwithstanding the opposition, proceeded to make appointments in places where before he had made none."*

The jail and court-house for St. John's were erected, and that at Ferryland put in progress; and the governor thought "the very sight of these two prisons would check many people in their evil courses." But there were "two kings of Brentford," and memorials poured in upon the governor from the justices, complaining that the fishing admirals obstructed them in the performance of their duties, and had taken all their authority from them, by deciding upon

* "History of the Government of the Island of Newfoundland, with an Appendix, containing the Acts of Parliament made respecting the Trade and Fishery. By John Reeves, Esq., Chief Justice of the Island. London, 1793." This work is the most faithful, unbiassed, and useful document on record, of the legal history of Newfoundland, and is derived from the archives of the Colonial Office, from those of the Board of Trade and Plantations, as well as from the author's own experience as Chief Justice.

all riots, breaches of the peace, and other offences, and had seized, fined, and punished at their discretion, had issued tavern licences, and had very cavalierly informed them that they were only justices of the peace during the winter; that the fishing admirals derived their power from an act of parliament, whilst the governor's was only from the privy council.

The merchants in England supported these pretensions, and in their memorial to government, prayed that the authority of the justices might cease whilst the fishing admirals were present; described the justices as unfit, and charged them with supplying the fishermen with liquors, etc., at a rate much higher than the merchants would be ready to afford them at.

The attorney-general was again appealed to, who decided that the admirals should restrain their jurisdiction to matters connected with the fishery, and the justices to those entrusted to them, relating to matters involving disputes amongst the settlers, and to breaches of the peace. This opinion was delivered on the 19th of December 1730, but it did not prevent the continual collision of interests, and as Chief Justice Reeves observes, although the justices were perhaps taken necessarily from

an uneducated class, yet the admirals were no better, and as the opposition was one against all legal power and the ordinary rules of civil government, it plainly shewed an unabated desire, that "the inhabitants and poor planters should be deprived of all protection from the government, and should be left wholly at their mercy."

I do not find, in any accounts which I have been able to collate, at what period Captain Osborne retired from his onerous and vexatious duties; but very shortly afterwards his successor, Captain Clinton, of the Royal Navy, received instructions to make a report upon the state of his government, respecting the administration of justice; and Mr. Reeves observes, that that officer and his successors did send such accounts of the opposition of the fishing admirals to the civil government, as were scarcely to be credited but by those who had been already made aware of their conduct; and he adds that "it would be tiresome and nauseous to detail any more upon the subject." Nor was it until several years afterwards, that this troublesome crew were comparatively quieted, by finding that the ministers at home had at last determined to persevere in esta-

blishing a regular civil government in Newfoundland.

Who were the naval officers administering this government, from 1730 until 1738, excepting Captain Clinton, does not very clearly appear, and we must therefore, as nothing very unusual seems to have occurred in the interval, proceed to the year 1737, when Captain Vanbrugh was in office, and it was first proposed to establish a court of Oyer and Terminer; but the commission was clogged with such restrictions that it was rendered useless, and was not finally issued until some years afterwards.

In 1740, Lord George Graham was appointed to succeed Captain Vanbrugh, and in 1741 we find the Honourable John Byng, as Civil Governor of Newfoundland, whose squadron was very successful in capturing the Spanish vessels in the neighbouring seas, England being then at war with that nation; and such was deemed the expense of sending these prizes home for final adjudication, that the government established at St. John's, a "court of Vice-Admiralty," the first judge of which was William Keen, Esq., an experienced merchant, who was also appointed naval officer, to collect

the fishery returns from the different fishing admirals yearly, to examine all ships' papers and manifests, with a deputy naval officer to assist him. He was also health officer.

The succeeding governor was Sir Charles Hardy, Captain of H. M. S. Jersey, who was appointed in 1744.

In 1749, Captain, afterwards Lord Rodney, in the Rainbow frigate, appears as governor, and the succession afterwards is more clear.

In April 1750, Captain Francis William Drake assumed the government, and a very important era dawned upon the island, as the governor was then ordered to issue a commission, that empowered him to appoint "commissioners of Oyer and Terminer," for the trial of felons in Newfoundland, being the first real attempt to establish law and justice in the island. It merely restricted the governor from trying or pardoning treason, nor could any sentence be executed until reported to the king, and the court was only to sit when the governor was actually in the limits of his government, or, in other words, not in winter.

This measure met with the usual opposition, but not so forcibly as heretofore, as naval law was now beginning to get uppermost, and was

too decided in its operations to admit of much cavil on the spot.

Captain Drake was succeeded, in 1753, by Captain Bonfoy, during whose administration Lord Baltimore renewed his claim upon the province of Avalon, which, from neglect, had slipped out of his grasp; but it was ruled that his title to the province had lapsed.

The naval governors usually remained in charge of the squadron, or ships appointed to protect the fisheries, for two or three years, going home at the close of every autumn, and living chiefly afloat.

Captain Dorril succeeded in 1755, and was relieved by Governor Edwards in 1757.

In 1760, we find Captain Webb as naval governor, and that during his administration a Mr. Scott made an ineffectual attempt to open an intercourse with the Aborigines, or Red Indians, who slaughtered him and his companions.

In 1761, Governor Graves was left in so unprotected a state, that a brig was equipped at the merchants' expense, with guns; the command given to Lieutenant Neal, and she was sent as a convoy to protect the homeward-bound fishing vessels. In consequence of this neglect or oversight, a French squadron arrived in the

Bay of Bulls, on the 24th of June 1762, and having landed troops, they proceeded over roads which even now are sometimes almost impassable from bogs and rapid rivulets, to St. John's,* where they captured the Grammont sloop-of-war, and sixty-three soldiers, composing the weak garrison, inflicted almost irreparable injury upon the trade, and took the hitherto invincible station of Carbonier, and the village or town of Trinity. They immediately commenced strengthening and repairing the fortifications of St. John's.

Upon intelligence of this disaster, Governor Graves, who was convoying in the Antelope a large fleet of merchantmen, and was met on the Great Bank by a hired sloop, which Captain

* This road, reaching to Renowes, has been carefully bridged over the torrents which formerly were most hazardous to cross, one false step on the stepping-stones involving certain destruction. It is contemplated to continue it, and finish it to Trepassey. Along the coast, at present, it is excellent for four miles, good as a bridle path to the Bay of Bulls, twenty-five miles, and thence from bay to bay to Renowes. It will open, with the Placentia road, access to all the coast of the Atlantic shore on the south of Avalon and the great bays of Placentia, Trinity, Bonavista, and Conception, thus almost encircling with a belt of road the whole peninsula of Avalon.

Douglas, who happened to be on a cruise to the southward of the island, and had received the news of the appearance of the French fleet, had detached to meet him, immediately took measures to secure his valuable convoy. He then sent the sloop to Ferryland, with a party of marines to garrison the Isle aux Bois, where a number of the inhabitants had taken refuge, and had fortified it as strongly as they could, and thence directed it to proceed to Halifax, with dispatches to Admiral Lord Colville and Sir Jeffry Amherst, the commanders of the land and sea forces, whilst in the Antelope he repaired to Placentia.

Placentia, once a strongly fortified position, was now in ruin, but Governor Graves forthwith repaired, as he best could, Forts Frederick and Castle Hill, and appointed Captain Douglas to superintend the fortifications at Ferryland.

Monsieur de Ternay, the French admiral, was all this time very busily employed in the harbour of St. John's, with a squadron very superior, while at anchor in that secure position, to any which the British commander-in-chief in North America could bring against him. But Lord Colville did not lose much time in looking out for his rival; and Sir Jeffry

Amherst, the military chief, ordered his brother, Colonel Amherst, to collect troops from Louisbourg, and on the 11th of September 1762, that officer joined the admiral off St. John's, with eight hundred Highlanders and some provincial light infantry.

Lord Colville, having previously reconnoitred the Bay of Bulls, now blockaded De Ternay, by lying off the narrows of St. John, out of which harbour one large vessel at a time only, even with the most favourable wind, can ever attempt to move.

The French destroyed the access to Quiddybiddy, a small boat harbour close to St. John's, and thus the troops were forced to proceed to Torbay, about seven miles to the northward, where they succeeded in effecting a landing under a most severe and galling fire, the coast, excepting in one or two places, being a wall of precipices.

The French retreated into the woods, and, skirmishing the whole way, with much loss, the British forces drove them onwards until they arrived within a mile of St. John's, where they attacked and took the pass of Quiddybiddy by storm. Thus they were enabled to remove the obstructions which the enemy had

created in the entrance of the boat harbour, and landed guns and stores for the attack upon the capital.

The next object was to dislodge the French from the hill, now called Signal Hill, which overlooked Quiddybiddy, and was separated from it by a small lake, a mile long by about a quarter in breadth. Signal Hill is surrounded by many eminences of rock, which rise out of its side towards this pond, and each of these is a strong military post; the whole mountain was, moreover, covered with brushwood and a low forest, and is a mass of broken and jagged rocks, five hundred and ten feet above the sea, near the abrupt crest of which is one large and another small pond, with several deep gulleys.

A stronger post against infantry (for cavalry could not be used on it) there can scarcely exist, and yet Captain McDonald, with his Highlanders and provincials, gained the various natural obstacles unobserved, until the French saw him climbing upon the very crest of the position, which he actually gained amidst volleys of musketry, the return to which speedily convinced his enemy that it was time to retreat. This daring and excellent officer

was killed, in the moment of victory, with his lieutenant and four men, and eighteen of the brave assailants were wounded.

The French still occupied in force the position to the westward, commanding the town and harbour, as well as that immediately under Signal Hill, now called Fort William, which looks into the Narrows.

On the 16th of September, Colonel Amherst, having completed his batteries on Signal Hill, near George's and Parson's Ponds, attacked the enemy vigorously, and took Fort William, which was then a mere battery and breastwork, and, overawing the town by his guns on Signal Hill, the navy proceeded to clear the Narrows of the small vessels, which the French admiral had sunk there to obstruct the channel; and the rest of the guns necessary for continuing the operations, as well as the stores, were landed before a violent equinoctial gale drove Lord Colville off the coast.

The military or naval reader must be made acquainted that the harbour of St. John's is a sheet of deep but not broad water, which runs at right angles to the Narrows, or entrance, and is about a mile in length. The Narrows, a third or a fourth of that distance, are

bounded by precipices, on the east, by others three hundred feet high, and on the west side by a mountain somewhat less precipitous, but nearly six hundred feet in altitude; and almost inaccessible from the sea coast, on the south.

The city of St. John's lies on the north side of the harbour, and is built on a sloping range, which attains no greater elevation than perhaps about one hundred feet, flanked to the westward by the hill on which the French made their stand, out of cannon-shot from the English batteries. The south side of the harbour is formed by the high range of mountain land above alluded to, which comes down from its crest very rapidly to the harbour, and in those days was impracticable for cannon, or even for troops, owing to its precipitous nature, and from being covered with a low but almost impervious forest.

In September, moreover, frequent fogs obscure the crest of Signal Hill, and the whole harbour, whilst they scarcely affect the town or its vicinity.

The French, therefore, driven to the corner of the western part of this military stronghold, could have no hope to escape by the road through which they arrived at it, the Bay of Bulls, which

they knew had been cut off. The country around was a mass of bog and forest, and every avenue, few in those days, carefully closed; and thus, although superior in strength and in material, they were completely checkmated. As soon as Lord Colville weighed anchor, before a storm which would have been his destruction had he remained, the French admiral, perceiving the state of affairs, and that the troops had hemmed him up in the further end of the harbour, took advantage of a dense fog, which completely buried in its folds the magnificent basin he was so insecurely anchored in, and, under cover of its cloud, passed out of the Narrows, towards which his antagonists had cleared the way for him by removing the vessels he had sunk, and escaped to sea, leaving his troops to fight the matter out as they best could.

Colonel Amherst, on the night of the 17th, opened a battery against the French position, with one eight-inch mortar and eight smaller ones, which the French garrison stoutly returned. Shells continued to fly between them until the 20th, when these brave troops, abandoned by their fleet, capitulated upon honour-

able terms, and Lord Colville, who had returned to the harbour as soon as the storm subsided, sent them to Brest.

Thus the English dominion was re-established in Newfoundland by a handful of men, who had surmounted difficulties by a perseverance which can only be appreciated by those who have examined the scenes of their toil.

Captain Macdonald and Lieut. Schuyler, of the Royal Americans, were killed, and Captains Baillie and McKenzie severely wounded, but not above twenty men were lost on the part of the English, who fought with unequal numbers against some of the best troops of France.*

It would not be doing justice to the devoted

* The French squadron consisted of the Robuste, 74; L'Eveillé, 64; La Garonne, 44; La Licorne, 30; and a bomb vessel, with fifteen hundred soldiers, plenty of artillery, and stores. The British force, originally only of eight hundred soldiers, was divided among the garrisons of Placentia, Ferryland, and this expedition. The French lost a fine frigate, which was intercepted in carrying military stores to Newfoundland, by Captain Hervey, afterwards Lord Bristol, who fell in with her in his passage from the Havannah.

loyalty of the settlers in Newfoundland of that day, if their exertions were passed over in silence, and, amongst the leading men, I were not to notice the admirable conduct of Robert Carter, of Ferryland, a merchant, whose family still exists there, and is numerous in the island. He supported the garrison and inhabitants who had fled to the Isle aux Bois, (now called the Isle of Boys,) from the 24th of June to the 9th of October 1762, by procuring provisions and other necessaries when those articles were exorbitantly dear, and difficult to be got at.

Mr. Charles Garland, also, a name well known in the colony, who was then a merchant at Carbonier, in Conception Bay, paid, fed, and supported, a detachment of men, who garrisoned a large battery on an island near the mouth of the harbour, and raised numerous squads of sailors for the temporary uses of the fleet.

The principal employment of Governor Graves, on taking re-possession of his command, was to afford relief to the sufferers by French occupation, and in sending home the distressed fishermen who had been left on shore,

as well as in providing support for the poor during the winter.



Some marks of the French dominion at St. John's still remain: the stone buildings at Fort William, it is said, were erected for their commander, and were built in a most substantial manner, being yet the heaviest and strongest stone houses in the island; some chairs, with the fleur-de-lis, which belonged to the commandant, are also yet in existence, and there are men still living near St. John's who remember the battles. In short, the year 1762 was a most memorable one in the annals of the British colonies. British valour, in that year, triumphed in the conquest of Martinique and the other Caribbean Islands; at the Havannah; in the Philippines, which should have remained British provinces; and at Newfoundland.

The celebrated treaty of Paris followed these glorious feats, and on the 10th February 1763, France formally yielded to us Nova Scotia,

Canada, Cape Breton, and, in short, all the new British North American colonies; in return for which cession of all prior claims, England very unwisely, but very magnanimously, confirmed the thirteenth article of the treaty of Utrecht, which permitted the French to fish and cure fish on the coasts of Newfoundland before mentioned; they were also permitted to fish in the Gulf of St. Lawrence, at a distance of three leagues from its shores, and fifteen from those of the Island of Cape Breton, whilst the rocky islets of St. Pierre and Miguelon were made over to them, on condition of not erecting any fortifications or mounting any guns thereon.

A new addition to the government of Newfoundland was also made, by placing all the coast of Labrador to Hudson's Straits under the orders of its governor, who was now styled "Governor and Commander-in-Chief in and over the Island of Newfoundland, in North America, and of all the coast of Labrador, from the entrance of Hudson's Straits to the River St. John's, opposite the west end of the Island of Anticosti, including that island, with any other small islands on the said coast of

Labrador; also the Island of Madeleine, in the Gulf of St. Lawrence, and of all forts and garrisons erected or established, or that shall be erected or established, in the said island, or on the coast of Labrador, within the limits aforesaid."

The resident population had now reached to upwards of seven thousand, and thirteen thousand eleven hundred and twelve, in all, were employed on the shores, in the fishery, or in business connected with it, or in the fur-hunting of the interior, whilst four hundred sail of vessels carried on the trade with the mother country and British America, and England was now actively engaged in fostering it; Belfast, Cork, and Waterford, in Ireland, were now eminent fishery ports.

Amidst all this addition to its resources, Newfoundland was troubled by the eagerness of the French government to obtain the mastery of the shore fisheries, and by a claim set up to extend the French coast from Point Riche to Cape Ray, or for two hundred miles more of the western shores of the island; this, however, was disallowed, and the Board of Trade bestirred itself in representations to the king,

shewing the vast importance of the British rights, and the nature of the trade.

In 1764, Captain Hugh Palliser was sent out as governor, and as the French had detached men-of-war to St. Pierre and Miguelon, it was recommended that the forts in Newfoundland should be repaired, and everything placed in readiness, in case of hostilities or aggressions.

Captain Palliser's administration was an active one, and the rules and orders he drew up for the conduct of the fishery were afterwards passed into a law. In the months of March and May 1764, the commissioner of the Customs issued deputations, appointing a collector and comptroller at Newfoundland in place of the naval officer whose duties have been heretofore mentioned.

Newfoundland had hitherto been recognised merely as a fishing station; but in consequence of the previous seizure of some vessels in which foreigners were engaged, it was declared to be one of his majesty's colonies, or "plantations," as they were then styled, and on the 5th of June 1765, it was recommended by the Board of Trade that the navigation laws should be

therefore extended to it, which was accordingly done.

This additional strength to the local government was met by the merchants at home and the fishing adventurers with clamour and complaint, and the fees of the Customs' department were evaded or resisted as much as possible.

Governor Palliser next endeavoured to define the rights of property in the island, the which had embarrassed his predecessors, who had undergone much vexatious exposure to lawsuits, for what they had done respecting the fishing-stages and ship's rooms. He also vigorously opened the free fishery on the coasts of Labrador, where he had to contend against exclusive claims for posts and stations, in consequence of grants made illegally by the governors of Canada, and he ejected the British American inhabitants of the neighbouring colonies, who were actively concerned in some of these settlements.

All these acts brought down upon Governor Palliser a mass of complaint, which led to inquiries occupying nearly four years, and although he carried most of his points, yet, in

consequence of the seal-fishery at this time pursued in Labrador requiring a more resident population than that of the cod or salmon, and that it would have been unjust to deprive the persons altogether who claimed under Canadian grants, Labrador was again separated from Newfoundland, and annexed to the province of Quebec by the act of George III., statute 14, cap. 3, in 1774.

The memory of Captain Palliser, afterwards Sir Hugh,* requires more than a passing

* Cook, the immortal navigator, first entered the navy as a volunteer, in the Eagle, of 60 guns, to which Captain Palliser was soon afterwards appointed, in October 1755. By his interest and that of Cook's friends, as well as his own merits, he obtained a master's warrant, on the 10th May 1759, or only four years after entering the navy as a common sailor. Palliser was his steady friend, and Cook joining the fleet for Quebec in the Mercury, was employed in reconnoitring by Admiral Saunders, at the Captain's recommendation, as well as in making a chart of the St. Lawrence, which to this day is the best, although it is said that Cook had never before used a pencil, and knew nothing of drawing. On the 22nd Sept. 1759, he was appointed, by Lord Colville, as before mentioned, master of the Northumberland, his flag-ship; and being at Halifax during the winter, he applied himself to

notice. He was one of the most enlightened and active of the naval governors of Newfoundland; and although severely wounded in the leg, when young, in the Mediterranean, and constantly subject to pain from the incurable nature of that wound, which ended in his

read Euclid and to the study of astronomy, and all the other branches of science useful to a seaman. He went with the admiral, in September 1762, in the expedition to recapture Newfoundland from the French, and having shewn great activity and diligence in surveying Placentia harbour and fortifications, Captain Graves, then governor of Newfoundland, was struck with his sagacity, formed a friendship for him, and employed him wherever the expedition went, in noticing the coast and navigation of the seas there. In 1762, Cook went to England, but returned with his patron, Gaptain Graves, who, as governor, obtained with difficulty an order for the establishment of a naval survey of Newfoundland, and got Cook appointed to carry it on. He surveyed St. Pierre and Miguelon, previous to the surrender of those islands to the French. Cook again returned home, and in 1764 Sir Hugh Palliser, his steady friend, having been made governor, he went out with him to continue the survey, having received a commission as marine surveyor of Newfoundland and Labrador, on the 18th of April 1764, with the Grenville schooner to attend him. In this arduous service he continued until the winter of 1767. His surveys are the only existing

death, at an advanced age, in 1796, he was indefatigable, and acquired ample knowledge of everything relating to the fishery trade. His government was conducted with moderation and humanity, and although he had to deal with a very intractable race, yet, by patiently investigating the abuses which were as rife as

ones, and he, moreover, explored the interior in many directions, and laid down several large lakes. He also observed an eclipse of the sun at one of the Burgoo islands, near Cape Ray, in latitude 47° 36′ 19″ north, on the 5th August 1766. His observation was sent to the Royal Society, and published in a short paper in the 57th volume of the Philosophical Transactions; and the same eclipse having been observed at Oxford, the longitude of that part of Newfoundland was well settled, and Cook first obtained the character of being an able mathematician. Some of his survey marks still exist on that part of the coast. His subsequent career is well known, but the above account, abridged from Kippis' Life of Captain Cook, cannot fail to be interesting to every Newfoundlander; and it is to be hoped that some means will be taken to preserve the survey marks on the south-west side of the island, or at least the most prominent of them; for independently of Cook's general fame, he has been the greatest friend to Newfoundland that it ever had—his accurate chart of it, and its seas, having made its importance very clear.

ever, he succeeded in effecting much relief for the poor fishermen, and in carrying through afterwards, by his advice, the act of George III., statute 15, cap. 31, 1775, commonly called "Sir Hugh Palliser's Act," which, while it assisted the British merchant in his ship fishery, enforced the payment of wages to the fishermen, and provided a heavy penalty, hitherto wanting, to oblige the masters of vessels to secure the return of the seamen to England.

This was as ill received as it was kindly meant; and, in Chief Justice Reeve's day, the merchants complained that such was its rigour towards them, that it was with the greatest difficulty they could carry on the fishery. It, however, secured the right of British European subjects to the exclusive privilege of drying fish in Newfoundland, and gave several bounties encouraging the fishery; it controlled the frequently atrocious conduct of the masters of vessels towards their seamen, in the payment of wages in articles of supply instead of money; and gave the fishing sailors a lien or prior claim on the fish-oil for their due payment, empowering the Court of Session

and Vice-Admiralty with competent jurisdiction.

In 1769, Captain Palliser was succeeded by Captain the Honourable John Byron, so well known for the talents he exhibited in the voyages of discovery under Anson and to the unexplored regions of the southern hemisphere, in 1764, 1765, and 1766. He is said to have conducted his government with equal zeal and ability as his predecessor, and was the first governor who appears to have taken a lively interest in the aborigines, or Red Indians, who were ruthlessly massacred on every possible occasion by the barbarous furriers; he issued a proclamation for their protection, which the then lawless vagabonds of the north-eastern coasts cared very little about. He was succeeded, in 1772, by Commodore Molineaux, afterwards Lord Shuldham.*

During several preceding years, or from about 1764, the spirit of insurrection, which had so largely developed itself on the neighbouring continent, had been manifested in

* In whose administration the Wesleyan Methodists obtained their first footing, by the Rev. Lawrence Couglane, a clergyman of the Established Church, having introduced Methodism.

Newfoundland, in consequence of the frequent communication between the colonies, which had supplied her with provisions and goods to a vast annual amount, in return for her oil and fish.

In 1765, disturbances had occurred in Conception Bay and in St. John's; political excitement was used to cover fresh attacks upon the new customs regulations. It appears that the collector was under the orders of a superior resident at Boston, and as that port was one of the first to resist taxation by the mother country, so, in like manner, St. John's loudly denounced the introduction of duties on the free fishery, which had been protected from the early times of the 2nd and 3rd of Edward VI., and those of Charles II., by an act passed in the fifteenth year of his reign, all of which made it illegal to exact admiralty fees on the fishing vessels, or tolls, duties, or dues of any kind, on the fish.

Memorials were accordingly addressed to the king, but the petitioners forgot that Newfoundland had been declared "a plantation," and that at least the goods and provisions required for the settlers were liable to duties for the support of the civil powers. Commodore

Molineaux was ordered to enforce the payment of the customs duties at the several harbours, according to a table sent out to him, and this regulation was to continue in force from the date of his assumption of the government.

The collector, in 1763, having got involved in a civil action, was proceeded against, and, by a decision of the court of Vice-Admiralty, his office was stated to be an illegal one, as "it was doubtful whether Newfoundland was included in the acts of parliament respecting the officers of the customs in the colonies of America." This expression of opinion was backed by the principal merchants.

The passing of the Stamp Act had blown sparks from the embers of revolution, but the Tea Duty Act lit up a flame which consumed all traces of reciprocal feelings of amity between England and such of her transatlantic colonies as were ready to take advantage of French assistance.

The absence of the usual intercourse between the revolted colonies and Newfoundland, of course soon put a stop to the continued excitement kept up by the emissaries of the former, and, once clear of this continued action, the good sense of the inhabitants, as well as

their interests, caused them manfully to stand out for the flag of Old England.

But they did not do this without the most painful privations—privations felt to this hour; for the first congress, in the plenitude of power, and not in retaliation for injuries received from the island, passed a decree on the 5th of September 1774, which informed the British nation that "they had suspended all intercourse of trade by importation, and that unless their grievances were redressed, they would likewise discontinue their exports to her possessions."

The second congress carried this measure out against the unoffending Newfoundlanders, on the 17th of May 1775, and against all the neighbouring British colonies, ineffectually as regarded some of them, but horribly effectual as respected this island.

Newfoundland had increased in wealth, in population, and in respectability as a colony, and was proceeding with vigour to take its place amidst the principal ones, when it received this check. Vessels were detached from the fishery immediately, and sent to Ireland in ballast, to procure provisions; and the extent of this sudden demand on the mother

country may be imagined, when it is stated that the present United States then furnished Newfoundland with produce to the annual amount of all her imports from Great Britain and Ireland, or nearly 350,000*l.* sterling.

To meet the first decree of Congress, the British parliament passed an act, 15 George III., cap. 10, by which the revolting colonies were excluded from the Newfoundland fisheries, and a supplementary one declaratory of non-intercourse.

Scarcity and want now prevailed to an alarming degree, and the face of society was covered with a veil of gloom and despondency, which was subsequently increased by the appearance of American privateers off the coast, whose masters were so well acquainted with the harbours that they would run in and make prizes of vessels lying at the wharfs.

The year 1775 was remarkable as having been the era of distress of another kind, arising from natural causes; one of the most severe storms which ever assailed the island and its neighbouring banks, caused the destruction of hundreds of fishing boats and numbers of large vessels, and not fewer than three hundred men perished. The sea rose, as it is

said, suddenly, twenty feet above its usual level, and thus caused immense destruction on the land as well as in the harbours.

Commodore Robert Duff was governor during this awful year, and issued some salutary regulations, founded on Sir Hugh Palliser's act, for the security of the trade, in July, 1775, and protected the rising salmon fisheries at Gander Bay, the Bay of Exploits, Freshwater Bay, and other stations on the north eastern coast.

Commodore Duff was succeeded in 1776 by the first admiral appointed as governor, who received this honour in consequence of the vigour with which it was necessary to watch the American aggressions.

Rear Admiral Montague issued a proclamation on the 6th of May, 1776, for the better protection of the Red Indians, by order of the king, in which his majesty expressed his abhorrence of the inhuman barbarities with which they had been treated by the Europeans, and it directed that any furrier or other persons murdering these hitherto unprotected people, should be sent to England for trial.

But the admiral's time was more closely occupied in affairs of nearer moment, for on

the 17th of April, 1776, the congress had issued letters of marque, and on the 4th of July, in the same year, declared the thirteen United States a free and independent nation. France now took an active part in the struggle, and all the French ships, whether of war or trade, left the island early in the October of 1777, by order from Versailles; and on the 6th of February, 1778, a treaty, offensive and defensive, between France and the United States of America, was concluded.

Rear admiral Montague had been promoted to a vice-admiral, and his first act was to capture St. Pierre and Miguelon, and to send 1932 of the French, found residing there, to France, and to sweep the seas of the privateers.*

Rear-Admiral Edwards succeeded to the government in 1779, and employed his squadron

* During his administration, a presbyterian minister first officiated in Newfoundland; and a copper mine was opened at Shoal Bay, near Petty Harbour, but it did not answer the expectations formed of it. Captain Sir James Peart, of the Royal Navy, not long since recommenced operations on the same spot, but his death in 1840 again suspended them. The veins are small, in a hard, schistose rock, and appear to be carbonates.

in capturing French and American privateers, and fishing craft, in which it is stated that he was extremely successful.

Vice-Admiral John Campbell, who was naval governor in 1782, was celebrated for his prowess, in the action with Admiral Conflans, in 1759. He was an officer of amiable manners, and gave so much satisfaction at home that he continued four years in this lucrative and important command, which, according to some accounts, he owed in a great measure to the talent, zeal, and industry of his secretary, Mr. Aaron Graham,* who filled that office with such credit that his name is still remembered with respect; and that he had an arduous one, may be conceived from the circumstance of the English nation enjoying the exclusive control of the fishery in 1782, when the board of trade and plantations was abolished, and it was not until 1784 that a committee of council was appointed in England to manage its former duties.

In 1783, the treaty of peace permitted the

* Mr. Graham was afterwards a well known police magistrate in London.

citizens of the United States to fish on the former footing, but they were permitted, likewise, to cure and dry only in the "unsettled bays, harbours, and creeks of Nova Scotia, the Magdalen Islands, and Labrador." The French fishery was limited, also, to Cape St. John, instead of Cape Bonavista, on the eastern shore, as had been allowed by the treaty of Utrecht, and thence, however, was extended to Cape Ray, instead of Point Riche, on the western coast.

In 1785, the exportations from the United States to Newfoundland were limited to bread, stuffs, corn, and live stock, in British bottoms only. The resident inhabitants of Newfoundland had now reached the number of 10,244, and they had 8034 acres of land under cultivation; but they still suffered the more, as their numbers increased, from the want of an adequate system for the administration of justice other than that afforded by merchant captains, and by naval commanders; so that frequent memorials from the settlers were forwarded, and frequent discussions in parliament occurred in consequence, particularly respecting the right to landed property and ships' rooms.

In 1786, Rear-Admiral Elliot was appointed governor.* In this officer's administration, the act of 26 George III., cap. 26, was passed, continuing the bounties on the fishery for ten years, and improving the former act, abridging the powers of the court of vice-admiralty, and declaring that the court of Session was to hear and determine exclusively matters between master and servant. This was vehemently opposed by the judge of vice-admiralty and his deputies, and the abilities of the provincial secretary, Mr. Graham, were severely tried, as well the patience of the governor, who is stated to have been prudent, intelligent, and firm. Anspach remarks, that the records of the court at St. John's and Harbour Grace exhibited an "audacious and persevering resistance to the arrangements introduced by the new act, which almost exceeds credibility." But although Governor Elliot was very far from completely succeed-

* In whose administration Dr. James O'Donnell was sent out, with the appointment of prefect and vicar-apostolic of the Roman-catholic church. He was afterwards raised to a bishopric, and spent twenty-three years in the island, retiring on a pension from the Government, after a very meritorious career.

ing in this important work, he materially contributed to facilitate the more effectual improvements which were afterwards made by Chief Justice Reeves. He was ably supported in this task by his secretary, Mr. Graham, and by Captains Edward Packenham and Robert Carthew Reynolds, who were employed as his surrogates in the principal out-harbours.

This disgusting and vexatious state of affairs was in a slight measure remedied by the commission given to Admiral Mark Milbanke, who succeeded as governor in 1789, and who was empowered to destroy the extensive jurisdiction of the Vice-admiralty and Court of Session, by establishing a Court of Common Pleas. The judge of the Vice-admiralty had been removed in consequence of his opposition, and now the registrar of that court, much more contumacious, was sent off likewise by the spirited secretary. But nothing could please the discontented holders of former power, and a continued stream of petitions assailed the home government, until at length the king was advised, in 1790, to direct the government to appoint a Court of

Civil Jurisdiction, with extensive and defined powers; and at last, in 1791, a bill was brought into parliament for the institution of such a court permanently, consisting of a chief justice appointed by the crown, and two assessors appointed by the governor; but this was limited to one year, or, in other words, until its merits and capabilities to conquer the storm of opposition, and to introduce order and regularity into the island, had been fairly tried.

In 1792, another act was passed in consequence of this experiment, creating the Supreme Court of Judicature of the island of Newfoundland for one year also, and Chief Justice Reeves, a man of sound legal knowledge and extensive acquirements, was sent out, with directions to open it, and on his return in the winter to England, to draw up a statement of the condition of the fisheries, the customs and usages of the courts of justice, and, in short, to afford every information upon the colony to the home government.

Assisted by the secretary's local knowledge, and by his own firmness, prudence, and popular manners, he soon, as Anspach ob-

serves, silenced all impertinence, and shamed all attempts at opposition in the capital, and proceeding to Conception Bay, he examined into a most disgraceful state of things, as respected the administration of the laws there, and caused Captain Graham Moore to be sent to hold a surrogate court.*

We must not pass over this, the first chief justice of Newfoundland, without advising all those who desire to make themselves acquainted with the legal history of the island, to peruse the interesting work he published in 1793, under the title of the "History of the Government of Newfoundland."

In consequence of the information which he collected, the act of the 33rd George III., cap. 76, was passed in June, 1793, by which the supreme court was established, and the administration of the laws placed on surer grounds, so as to pave the way for that of

* Surrogate courts were, until 1809, courts held by virtue of an act passed in 1792, empowering the governor to appoint naval officers, to hold courts at the out-harbours, and to give these courts the same power as the supreme court, excepting for cases above forty pounds, when appeals lay to that tribunal. These officers were called "floating surrogates," and, as may be imagined, administered the law after the naval code.

1809, of the 49th George III., cap. 27, by which this court and the district courts were permanently constituted and made perpetual. In this year, Governor King held the reins of power, but was succeeded in 1794 by Governor Sir James Wallace, and he in 1797 was replaced by Vice-Admiral Waldegrave.*

Admiral Wallace's administration is chiefly marked by the attempt of a French squadron of nine sail of the line, and several other men-of-war, under Admiral Richery, to burn the fishing village in the Bay of Bulls, and to alarm St. John's, which had no other results than the destruction of the village, stores, and fishing-craft in the Bay of Bulls.

Admiral Waldegrave, afterwards Lord Radstock, rendered his administration remarkable by his zeal for the public welfare, by his strenuous efforts to counteract the insidious and hateful poison which "Paine's Age of Reason" and "The Rights of Man" were working in the small, and not very educated community he ruled over, and by his munifi-

* The Crow's Nest, an important military post, of striking features, in the view of the harbour of St. John, is named Wallace's Battery; under which, half way down the precipice, is Waldegrave's Battery.

cent and careful protection of the interests of religion and the due administration of the laws. He built a new church, patronized the formation of schools, and left a name lasting in the memories of those disposed to perpetuate good government, morality, and order.*

Notwithstanding the bloody and vindictive war then raging in Europe between England and France, Newfoundland rose in wealth, increased in population, and assumed a station of great importance; and it has been estimated, that in 1795 and 1796, the amount of property vested in the fishery of cod, salmon, and seals, was not less than a million and a half sterling. Yet, still settlement was discouraged, and those who remained in winter, were chiefly persons concerned in trade, or too poor to make the annual voyage home. The state of society at this period is most ably and most amusingly described by the Rev. Lewis Anspach, who was enticed to settle at St. John's, by some leading persons, in order to open a school, in consequence of resolutions entered into in 1798, under the auspices of

* The chief justice, by whom he was ably assisted, was Richard Routh, Esq.

the governor, the chief justice, and principal officials and inhabitants.

Governor Pole assumed the administration in 1800, and was succeeded by Admiral Gambier, who was appointed to the government of Newfoundland in 1802. The character of this governor is well known. He promoted the interests of the colony to the utmost of his power, fostered the education of the people, and left the name of a mild and equitable man. The treaty of Amiens was signed early in this year, by which the French were reinstated in their possessions of Miguelon and St. Pierre, and in their concurrent rights of fishery. A regiment of volunteers, which had been raised in the colony under the name of the Newfoundland Fencibles, and which had been very efficient, was now disbanded; but the short peace soon rendered it necessary to reorganize it under the title of the Newfoundland Light Infantry, when it was extended to a thousand men, and placed under the command of Colonel Skinner. The French were again dispossessed, the squadron made many and most valuable captures, an immense quantity of dried fish was seized, and Newfoundland again flourished more and more.

In Admiral Gambier's administration, a female Red Indian was brought to St. John's, who will be treated of hereafter.

He was succeeded by Admiral Sir Erasmus Gower, in 1804, and during these administrations, several Sunday schools were established, law was more perfectly settled in its operations at the out-ports, and benevolent Irish societies were formed, both at St. John's, and in Conception Bay, for the relief of the poor fishermen and settlers.

Admiral Holloway was appointed to the command of the fleet, and governor of the island, in 1807, and in the next year, the first newspaper was printed in Newfoundland.* A volunteer militia was formed in this year, for the defence of the capital and island, and a post office was instituted, but no regular packet or mail.

Labrador was also re-annexed to the government of Newfoundland, with Anticosti; and an act of Parliament in 1809, rendered

* "The Royal Gazette and Newfoundland Advertiser," was published first on the 27th August, 1807, by Mr. John Ryan, and still continues as the official government paper, under the title of the "Royal Gazette." Mr. Ryan has Mr. Withers associated with him at St. John's.

the supreme and other local courts of justice permanent. An ineffectual attempt was also made by Lieutenant Spratt, R.N., to open an intercourse with the Red Indians, and such was the scarcity of fresh provisions, in consequence of the prohibition of export from Canada, Nova Scotia, and Prince Edward's Island, that Governor Holloway issued a proclamation to license the supply of cattle, corn, and fruit from the Western Islands.

Vice Admiral, Sir John Thomas Duckworth, was appointed governor in 1810. He visited some of the out-harbours, and renewed the proclamation of 1775, for the protection of the Red Indians, and sent an exploring party to cultivate friendship with them, under Lieut. Buchan, R.N., who lost two marines at the Bay of Exploits, where he had left them as a guard, at an apparently abandoned camp, whilst he and his party went to visit another station. On his return, he found his two soldiers decapitated, and that the savages had utterly fled.

In 1811, an act of parliament was passed, authorizing the holding of surrogate courts in Labrador. The governor offered a bonus of 100*l.* to any person who should bring

about a friendly understanding with the Red Indians.

By the act above mentioned, the harbour shores of St. John's were cleared of an intolerable evil. The ships' rooms occupied the whole beach, and having become almost useless, continued a source of everlasting dispute and contention. They were now thrown open, by lease for thirty years, to public competition, divided into building and water lots; and several very judicious measures were adopted to secure the town from fire, as well as to improve its appearance, it being at that time a confused mass of narrow streets and irregular blocks of wooden hovels and buildings. From this period may be dated the present city, which still has many serious imperfections, and has frequently been almost destroyed by fire, but invariably rises, like the phœnix, brighter and better from its ashes,—stone and brick houses, and wide streets, taking the place of the wretched wooden dwellings of former times, and infectious disorders, then so frequent, giving way before increasing cleanliness, and the natural salubrity of the climate.

The year 1812 is remarkable as the epoch

of the declaration of war by the United States of America against Great Britain. On the 17th of June, St. John's was put in the best state of defence, and the North American fleet, consisting of three sail of the line, twenty-one frigates, and thirty-seven sloops, brigs, and schooners of war, rendered any attack from the enemy, either French or American, hopeless. The numerous and splendid convoys, the exclusive possession of the bank fishery, and the immense trade now carried on, made the little capital a most important and wealthy place, and large fortunes were soon achieved; but the treaty of Paris in 1814 put a stop to this enviable state of things, as far as Newfoundland was concerned.

In 1813, Vice-Admiral Sir Richard Goodwin Keats was governor, and it has been computed that just before the close of the second American war in 1814, the exports of fish alone were valued at two millions four hundred thousand pounds sterling; 192,000 pounds' worth of train oil were exported, besides 20,000 quintals of salted fish in barrels; 156,000 seal skins, valued at five shillings each; 4666 tons of seal oil, at 36*l.* per ton; besides salmon, mackerel, furs, and berries,

worth 10,000*l.* more: altogether amounting to about 2,848,976*l.* sterling for exports. As may be readily supposed, however, in so isolated a position, the necessaries of life were high; flour was eight pounds per barrel; pork, upon which, with fish and biscuit, the sailors chiefly exist, was 12*l.* a barrel; butter, 3*s.* a pound, and biscuit 6*l.* the hundred weight. Fresh meat, as there was little or no pasturage then, was scarcely to be had, and for want of corn, poultry was exorbitantly dear. Hay for the few cows or horses kept by the military or chief inhabitants, for there were no roads, was brought from Prince Edward's Island, or Nova Scotia, and has been known to rise in value as high as 30*l.* a ton.

Admiral Pickmore was appointed governor, in succession to Sir Richard Keats. On Monday, the 12th of February, 1816, the capital was almost destroyed by fire, and such was the consequent distress of the poor, that the neighbouring colonies and the city of Boston, in the United States, supplied them with food gratuitously.

The years 1816 and 1817 were unusually

distressing to the settlers. The great fire, in the former, at St. John's, and the failure of the harvests in many portions of Europe in the latter, heaped misery upon misery; for the merchants who held stocks of provisions on hand, foreseeing the impossibility of prompt payment, contracted the usual credit system, and the populace, driven to despair, desperately attempted to take that which was otherwise out of their reach. Volunteer companies were raised, to prevent total ruin, and committees of relief were also formed, to dole out food at stated periods. The losses by fire are stated to have amounted, in St. John's, to upwards of 100,000*l.* sterling, and fifteen hundred people were driven, in the most inclement season of the Newfoundland winter, to seek fresh homes on board the shipping in the harbour, or wherever they could find shelter. Fortunately the exertions of the seamen and troops preserved the great warehouses and magazines, although a hurricane from the south-east was blowing at the time, and thus a town, then containing twelve thousand inhabitants, without exterior resources, shut in by the ice on its coasts, and without an interior to resort to, was saved.

Until the year 1811, no building could be erected in any part of Newfoundland without the permission of the governor, in order to prevent unnecessary settlement, and to protect the fishing adventurers, as well as to provide for the return of the mariners engaged in it to Britain. It was now evident enough that the utmost exertion of the local government was requisite to preserve the capital from similar destruction, and measures were accordingly adopted to enforce the building regulations.

The British parliament was appealed to, and by statements made to it, it appeared that the population of Newfoundland had, by the unexampled prosperity produced from the exclusive fishery carried on during the war, reached to nearly eighty thousand, whilst eight hundred vessels were employed in the trade, and the revenue of two millions annually had been yielded; but the fire, the scarcity in Europe, and the peace, had so altered its circumstances, that one mercantile house in Conception Bay alone had sunk 20,000*l.*, and poverty and want raged amongst the poorer classes.

Government immediately vested Admiral Pickmore, who is represented to have been a man of humane disposition and amiable quali-

ties, with discretionary powers, and forwarded relief to the sufferers.

But St. John's was fated to experience an increase of misery; for on the 7th of November, 1817, another immense portion of the city was destroyed by fire, with a large supply of provisions and goods in the warehouses; thirteen merchants' establishments, and one hundred and forty dwelling-houses, occupied by one thousand one hundred persons, were totally consumed. The value of the property thus destroyed was near five hundred thousand pounds sterling; and to increase the privations of those who escaped, another fire broke out on the 21st of the same month, by which fifty-six more houses were burnt down to the ground, besides several of the merchants' storehouses.

Admiral Pickmore laid an embargo upon all vessels and craft in the harbour, in order to ascertain the quantity of provisions left, which was found not to be sufficient to meet the demand until the ensuing spring. Many of those who could get away, accordingly soon afterwards sailed to the neighbouring colonies or harbours, or went home to Great Britain.

The spring of 1818 was remarkable for the intensity of the frost, which, in general, in the

southern parts of the island, is not severe, owing to its insular position; but this year the harbour was frozen over on the 10th of February, and an enormous impenetrable barrier of ice shut out all approach to the coasts. The months of January, February, and March, exhibited this unusual severity of frost, without much interval of milder weather, and had it not been that a previous supply of food had arrived, destitution, famine, and death would have almost annihilated the city.

In the midst of this severe winter, which has been stated to have equalled, in snow and frost, that of Greenland, the respected Governor, Admiral Pickmore, died. He had been the first naval officer who had been directed to remain on the island during the winter season; and, by a singular fatality, he was the first out of a succession of administrators, for sixty-eight years, to fall on his post. His body was placed in the vaults of the church, and subsequently carried to England, and he was succeeded, in 1818, by Vice-Admiral Sir Charles Hamilton.

Sir Charles was the first permanently resident civil governor, and occupied the old wooden government house, since pulled down, in Fort Townsend. During the early part of his admi-

nistration the affairs of the island began to brighten: the cod and seal fisheries proved unusually successful in 1818, and the change which had now taken place, so favourable to commerce in England, was sensibly felt in her long suffering colony, whilst St. John's began to rise from its ashes, and stone dwelling-houses and stores were everywhere erecting.

In 1819, an Indian female was captured and brought to St. John's, but on sending her back to her tribe she died, so that the intended communication with the Red Indians was frustrated. She was named Mary March, and the inhuman mode of her capture will be adverted to under the chapter of this work in which the unfortunate aborigines will be treated of.

The administration of justice was still far from perfect, although administered, as far as was possible consistently with his powers, by a man of talent and high attainments, Francis Forbes, Esq., an English barrister, who was made Chief Justice of Newfoundland on the 4th August, 1816. He took great trouble to render the courts as useful and as pure as was practicable, and to extend the incalculable benefits of British jurisprudence; but still the

anomalous system of capstan head law, under the designation of surrogate courts, existed in the outports, and the courts of session were not all that could be desired. Mr. Forbes resigned in 1822, leaving a respected name in the colony, and was succeeded by Chief Justice Tucker, who assumed his seat on the 5th May, 1823.

In 1824, in consequence of the inadequacy of the courts above mentioned, a bill passed the imperial parliament "for the better Administration of Justice in Newfoundland," and the chief justice was thereby enabled to have the assistance of two judges, and the island was divided into three districts, in each of which a court was annually to be held. It was, like the former acts, experimental; and did not entirely obviate all objection, or tend to diminish the difficulties existing about wages, between the adventurers and their employed fishermen.

In fact, as Mr. M'Gregor, in his work on British America, very justly observes, there has been no instance of a British colony so inadequately provided for, in the administration of its internal affairs, as Newfoundland. Always regarded as a mere fishing station, the

energies of its population were also thus always checked, and the interest, the obvious and actually necessary interest, of the merchant adventurers in the fishery was to keep power as much as possible in their own hands, and, as in the case of India, governed by a mercantile body, to exclude competition from without or within.

But a new era was now dawning. The appointment of a resident, instead of a floating governor; the decrease of the Bank fishery,—which altered the necessity of making Newfoundland a nursery for seamen; the declaration of such a man as Chief Justice Forbes that the island was capable of internal improvements; and the growing importance of Canada; rendered this key of the St. Lawrence a trust in which every Briton is interested; and accordingly the reader will find, that, during the government of Sir Charles Hamilton, the way was paved for a new state of things, which was to occupy the attention of his successor.

In the year 1825, the usual routine, during the war, of appointing the admiral commanding the Newfoundland squadron civil governor of the island, was departed from, and Captain

Sir Thomas Cochrane, of the Royal Navy, succeeded; and a "Royal Charter," the first efficient one of the kind, was issued on the 2nd of January, 1826, by which a most important and salutary change in the administration of justice was effected.*

This charter provided, that the island should be divided into the northern, central, and southern districts, and that over these a chief justice and two puisne judges should preside; that the supreme court should have powers to admit a sufficient number of solicitors and attorneys, duly qualified for the profession, to practise in the several courts; and that, as usual, it should grant probates of wills and letters of administration. It also provided ample salaries to the three judges. The governor was, moreover, directed to appoint annually a sufficient person as high sheriff of the island, who was to enter into heavy securities for the due performance of his office; and appeals might lie from the

* An imperfect census of the island inhabitants was also made in 1825, which gave 55,719. In 1832, another imperfect census gave 60,008. See Montgomery Martin's "British Colonies," vol. iii. p. 489. In 1834, it was supposed to be 75,000.

decisions of the supreme court to the king in council, for matters exceeding the value of five hundred pounds sterling.

In 1827, a very laudable society for the protection of the Red Indians, which was somewhat singularly styled "the Bœothic Society," from that being supposed to be the designation of the aborigines, was formed at St. John's; and means were adopted, but without effect, to discover the retreat or remnant of this interesting race.

The Bishop of Nova Scotia, also, in whose diocese Newfoundland had been placed, visited the island, and consecrated the different churches and chapels of the Church of England.

The administration of Sir Thomas Cochrane was a vigorous one, and he has the singular merit of having opened roads in the vicinity of the capital, and of directing great improvements in the town itself; whilst the cultivation of the soil, consequent upon his indefatigable attention to forming internal communications, now began to be attended to, and horses, cattle, and sheep were gradually finding pasturage provided for them. He also built a new government house, of solid stone

materials,—which, however, has proved too large and too expensive for the comfort of his successors; whilst, owing to the necessity of bringing all the cut stone from beyond sea, the expense of its erection proved enormous. It is also built on an exposed site, and, being not possessed of any exterior architectural beauties, does not much ornament the capital. Its interior accommodation is, however, very good, and well adapted for the Houses of Council and Assembly, and for public offices, which will undoubtedly be its final destination, as it is not by any means calculated for its present purposes, and the fact of having the government offices under its roof, renders it too public.

A new government house, in a more sheltered situation, on a smaller scale, will prove of great benefit to the succeeding governors; and as the colony has a large fund at its disposal, it is to be hoped that it will be soon erected, for the ornament of this rising city, as well as for the private convenience of the governor.

Sir Thomas Cochrane retained his office until 1834, and bestowed upon it great and unwearied attention, and displayed a magnificence in his viceregal functions before unknown.

He purchased and beautified a situation about three miles from St. John's, where a small, picturesque lake flows almost round a projecting woodland, on which he built an ornamental cottage; and, cutting a winding avenue through the woods, by the side of a brawling stream, and along the shores of the lake, he made an excellent road to it from the Government House, and styled his summer residence, "Virginia Cottage." A more elegant thought, carried more effectively into execution, could not have been devised, and it shews what even the rugged neighbourhood of St. John's is capable of, for there are few more lovely scenes in America than that thus adorned. It did not, however, long remain as an appanage of government; for, having been created out of private means, it was sold after the departure of Sir Thomas Cochrane.*

In 1830, the venerable and much-beloved bishop of the Roman-catholic church, Dr. Scallan, died universally lamented;† and, in the same year, a new court house and jail were

* To Mr. Emerson, barrister-at-law, and brother of the Solicitor-General.

† He was succeeded by the present bishop, Dr. Fleming.

built at Harbour Grace, and several societies for the benefit of the fishermen were formed, whilst mechanics' institutes now first commenced operations in Newfoundland.

The year 1831 is remarkable from the numerous petitions and memorials to the home government for constituting a permanent colony, by the institution of a "Local Legislature" for the island. These petitions were vehemently opposed by the principal mercantile houses at home connected with the fisheries; and after long and patient discussion, a "Representative Assembly" was granted in 1832, which placed Newfoundland on a par with the neighbouring provinces of Great Britain.

In August, 1832, Sir Thomas Cochrane obtained a new commission, with very extensive powers, and was constituted, in point of fact and law, the first civil governor. He was empowered to create a legislative and executive council, composed of seven persons, who individually could be suspended from acting by the governor, for any just cause. He was authorized to divide the inhabited parts of the island into nine districts, and had the usual

powers of a negative voice in bills, and of adjournment, prorogation, or dissolution of the provincial parliament.

Fifteen representatives for the lower house, or House of Assembly, were chosen out of the population, from that class who were natural-born subjects of England, or legally naturalized, free from infamous crime, and who were twenty-one years of age, and had occupied for two years before the day of their election, either as owners or tenants, a dwelling-house in the island. The electors were the whole male population of twenty-one years of age, occupying dwelling-houses, either as owners or tenants for one year; in fact, they were so extensive as to render the elections dependent upon the somewhat ticklish ground of universal suffrage.

With this experiment, the parliamentary campaign opened on the 1st of January, 1833; and shortly afterwards, Chief Justice Tucker, who was president of the council, resigned his office, in consequence of his differing with the House of Assembly upon the subject of trade and taxation, and a revenue bill, which had passed the Lower House, was thrown out, in the council, according to his advice.

Thus commenced a series of events which lasted during the administration of Sir Thomas Cochrane and his successor.

Mr. Tucker, who was very much respected in the colony, resigned, and went to Canada, and was replaced from that country by the late attorney-general of the Upper Province, Mr. Henry T. Boulton.

In 1834, Sir Thomas Cochrane was somewhat suddenly relieved of office by the appearance of a vessel of war bringing Captain Henry Prescott, of the Royal Navy, with a commission as civil governor, who found the colony flourishing in trade, but extremely difficult to manage.

The imports of Newfoundland this year amounted to 618,757*l.*, and the exports, to 826,659*l.*, leaving a favourable balance of 207,902*l.*, for the island, which then employed 888 British ships, carrying 105,570 tons, and twenty Spanish and American vessels, carrying 2978 tons; whilst the Spring Seal Fishery engaged 125 vessels, and employed nearly 3000 sailors from the Port of St. John's only; and Conception Bay sent out 218 ships, manned by 4894 men; Trinity Bay, nineteen vessels; and many more from other out-harbours, en-

gaged in this dangerous but lucrative destruction of the poor seals, amidst the treacherous floating ice near the coasts of Newfoundland and Labrador.

It has been said, that in 1835 the population of Newfoundland had risen to 95,000, but that the fishery on the Great Banks had almost ceased, for where, during the war, at least 700 ships were seen, there were not then twenty employed, the fishing-ground being covered with French, American, and other foreigners. The capital of the island was also attaining great importance, and had 15,000 inhabitants.

Captain Prescott's reign lasted until the summer of 1840, and was passed amidst constant turmoil, from the opposing interests of the House of Assembly and the Council; the former adopting bills as thick as hail, and the latter swamping them as fast as they appeared.

The scenes described at the elections almost exceed credibility, and the troops were kept during those periods always ready to prevent or to check popular commotion, and altogether the country was in a state of agitation from one end to the other.

Chief Justice Boulton, an acute and intelligent lawyer, in the course of his duty, sen-

tenced several individuals to the gallows; and a warfare was kept up by the press against the catholic priesthood, who were openly accused of controlling the elections.

The resident population had apparently been overrated, as I do not find any authentic documents which carry it higher than 80,000 in this year, 1840; although, strictly speaking, it was probably much more; of which, about one-half are protestants, either of the churches of England or Scotland, and Wesleyan methodists and congregationalists, and the other half are Roman catholics. The protestants are chiefly of English descent, and the latter of Irish parentage.*

But of this hereafter, under the proper head. Suffice it now to observe, that the broad, religious line of separation, is also strengthened and widened by the interests of the mercantile community and office-bearers, the most wealthy and influential portion being, as well as the lawyers, all protestants; but then it is to be borne in mind, also, that one-half of the people are Roman catholics and Irish, or of

* There is but very little doubt that the present population of Newfoundland is 100,000.

Irish descent. Those recently from or born in Ireland, have not entirely forgotten the old distinction of orangeman and papist.

Such a society, so constituted, it would naturally be supposed, must abound with the vindictive and furious passions which have pervaded Ireland for centuries, and that midnight murder, ribandism, and every atrocity conceivable would exist, in a country where, from the scattered nature of the settlements, the executors of the laws are seldom seen, where a single constable rules over miles of coast, and where the poor fisherman returning from his toil in October has no other resources, apparently, but drink and debauchery, during a six months' winter.

So far from this being the case, there has not been a capital punishment for years; the people are very orderly and respectful to their superiors; temperance has enrolled under its banners the greater proportion, and housebreaking and serious crimes are actually unknown; and it is universally admitted that there is no country in the civilized world where greater simplicity of manners or less crime exists, than in Newfoundland. In summer, the people are on the wide ocean, toiling

for their existence during the winter, and in winter, excepting in the towns or villages, they have no inducements to sin or outrage, simply because they have no intercourse with their neighbours. And even in a city like St. John's, without a regular police, you may walk the streets at all hours of the night, not only without danger amongst these excitable Terra-novans, but even without often meeting with any of them after ten or eleven o'clock.

Amongst the other events of Captain Prescott's administration, is one which led to very serious results. Chief Justice Boulton, fresh from the political strife then raging in Upper Canada, had lost his situation as attorney-general of that province, from an opposition to some views of the home government, respecting a miscreant who afterwards involved Canada in civil war. The colonial minister, however, to lessen the effect of his official act, appointed him chief justice of Newfoundland, a situation of honour and trust perhaps greater than the former, but infinitely less profitable.

The war was raging when Chief Justice Boulton arrived at St. John's, between the two parties in Newfoundland, composed as we have already stated. He acted with vigour

and extraordinary moral resolution, to put the administration of justice in such a position as he conceived would assist the government, and tend to quash the existing feuds, whilst it would also ensure a tangible and known form of law, from which no deviation would be admitted by him. He altered, accordingly, the scale of jury fees, the long-acknowledged claim of the fisherman's lien for the payment of his wages, and the mode of striking juries; and then, meeting with unwearied opposition and attacks from the press, he very boldly, but very unreflectingly, doffed the solemn robes of justice, descended from his dignified chair of state, and on the floor of his own court pleaded before two inferior judges, his own cause against libels upon his own public conduct.

For these and other acts he was charged before the Privy Council by the House of Assembly, with being a corrupter of justice, a political partizan, and a magistrate who endangered the constitution and the peace of the community.

It is extremely interesting to read the proceedings of the Council upon this important case. The speech of that eminent civilian, Dr. Lushington, is a most forcible appeal to that

august court. He was employed by the House of Assembly; nor is the speech of his antagonist, Mr. Burge, who guided the case of Chief Justice Boulton, less distinguished or interesting.

The Lords of the Committee of the Privy Council, after a patient hearing, presented a report to the Queen, which, whilst it exonerated Mr. Boulton from any corrupt or intentional deviation from his duty as a judge, and expressed disapprobation of the language and conduct which had been used towards him in his high office, recommended that he should be removed, for having indiscreetly permitted himself "so much to participate in the strong feelings which appeared unfortunately to have influenced the different parties in the colony." This report was confirmed by the Queen in Council on the 5th July, 1838, and a successor in the person of Mr. J. G. H. Bourne, an English barrister, was soon afterwards sent to the colony.

Captain Prescott was destined to be the last of the original race of naval governors of Newfoundland, amongst whom so many had so highly distinguished themselves. His administration was unmarked by anything of a public nature

respecting the internal interests of the colony, as the roads which Sir Thomas Cochrane had so ably commenced were not continued, nor were the agricultural resources of the island developed, in consequence, perhaps, of the state of parties during his governorship.*

A new era dawned upon Newfoundland in the summer of 1841, as it was known that a military officer of high rank had been offered the government of Newfoundland.

At last, the intelligence arrived that Major General Sir John Harvey, K.C.B., K.C.H., had accepted this high and important post, and that he had proceeded to England, in one of Cunard's steamers, to receive his instructions.

Sir John remained but a short period in London before he again crossed the Atlantic in a steamer, and embarking on board the Vestal Frigate at Halifax, he arrived at St. John's, on the 16th September 1841.

The demonstrations made by the capital to receive his Excellency, who had conducted two neighbouring governments, and had been

* In the autumn of 1840, a regular sailing packet between Halifax and St. John's, once a fortnight, had commenced under the orders of the Postmaster-General.

distinguished on the staff during the war in Canada, were great; the different public societies with their banners and ornaments, the people in mass, and all the clergy of every denomination, the magistrates, merchants, and official gentlemen, formed themselves near the Queen's Wharf,—at which his Excellency landed with his suite, under a salute from the frigate, whose yards, as is usual, were manned on the occasion.

Sir John walked up to the Government House, about half a mile distant, followed by a train of many thousand persons, and was immediately sworn in, and then addressed the assemblage; and, in a short time afterwards, held a levée, which was more numerously attended than any which had ever been remembered in Newfoundland.

It would not be proper for the writer of this work to enter further into the public acts of Sir John Harvey, or to descant on his measures;* it is sufficient to observe that all

* All classes here look with the greatest reliance upon the measures which Lord Stanley may bring forward relative to this ancient province of Britain; and it is singular enough that the government at home have, perhaps, the most easy task relative to this colony, of any now in progress for consolidating the

classes of the Newfoundland subjects of her Majesty hailed his appearance as the forerunner of an end to the political and other disunion which had so unhappily prevailed for some years past, and which has renewed the feelings of ancient times—feelings that had at one time lapsed almost into oblivion.

They hailed it, as the certainty that Newfoundland had now become one of the colonies of Great Britain; no longer a mere fishing station, but an important and effectual arm of the great power which occupies the foremost rank amidst the nations of the world.

To conclude this long historical chapter, I cannot perhaps do better than give the words of his Excellency, in the first public speech made by him in Newfoundland, before the Agricultural Society, at its formation—a speech upon a subject which has hitherto been "tabooed," as relates to this interesting and highly important appendage of the British crown.

empire; for all here are persuaded that nothing will be done without the most mature consideration, and that when done, it will be firmly acted up to in the colonial department.

Speech of his Excellency Sir John Harvey, upon the opening of the first Agricultural Meeting in Newfoundland, in his capacity as patron of the society, and delivered in the Factory, at St. John's, on the 14th of January, 1842 :—

"Gentlemen,—From the moment of my appointment to the government of this ancient and loyal possession of the British crown, it became my duty to identify myself with all its interests, and the cordiality with which I was received in the island by all classes of its inhabitants, at once converted that duty into a source of the highest gratification. I do not affect to conceal from you, however, that I brought with me the impression, which I believe to be universally entertained out of the island, that it possesses but one class of interests—viz., those connected with its trade and fisheries. It was, therefore, with equal surprise and pleasure, that I discovered, as well from my own observation as from the information of others, that Newfoundland is, in reality, something more than a mere 'fishing station,' and possesses resources beyond the mere 'rocks on which to dry the nets of the fisherman.' In a word, I saw in it the un-

doubted evidence of a capability for agricultural pursuits, far beyond what I had imagined to exist; and I likewise saw, that by no other means can the great staple of this island, its 'fisheries,' or the great national objects, the 'nursery of seamen,' and the consumption of the manufactures of the parent state, be so effectually promoted, as by bringing the homes of the fishermen nearer to the scene of their pursuits and operations; in a word, by encouraging settlement and the cultivation of the soil—an encouragement which contemplates the rapid increase of its population, consequently, of its fishermen and mariners, as well as of a class of brave, hardy, loyal, and permanent settlers, who would constitute the 'constitutional defence' of the colony, and whose labours, as auxiliary to its fisheries, might, at no remote period, go far to render the island independent of all 'foreign' countries for the means of feeding those engaged in them.

"Without entering into speculations regarding a subject with which we are, as yet, imperfectly acquainted, but upon which it will be the duty of the executive government, through the aid of the provincial legislature,

to acquire more accurate information—I mean the adaptation, or otherwise, of the extensive prairies of the interior of the island, for cultivation and settlement—it may be sufficient, for my present purpose, merely to advert to a fact which is within the knowledge of you all—viz., that this island, throughout almost the whole extent of its bays, harbours, and inlets, is skirted by a belt of cultivable land, varying in depth, from one to several leagues, well calculated to reward the labours of the agriculturist; of which no more convincing proof can be required than the specimens of produce now before you, consisting of wheat, barley, oats, turnips, potatoes, etc., equal in size, in weight, and in quality, to the productions of any other country, England not excepted! It may be asked (elsewhere) 'How is this to be explained with reference to the reputed sterility of the soil of Newfoundland, and to the length and severity of its winters, and the consequent shortness of its open season.' The answer is: 'By the productive qualities of that soil to which the imputation of sterility so unjustly attaches; by the fineness of its autumnal season, which affords ample opportunity for the preparation of the ground for

the 'spring crops;' and by the almost unexampled rapidity of vegetation during the summer, by which the shortness of that season is amply compensated.' I repeat, then, to you, gentlemen, what I have so frequently said in two neighbouring colonies: 'The results of your harvests may, under the blessing of that Providence upon which they must in all countries alike depend, be ensured, as far as they can be, by human means, by a provident industry, aided by a system of agriculture, adapted to the climate and soil of the island.'

"This observation conducts me to the more immediate objects of our meeting, and to the position in which I stand before you, as the patron of an association, upon the formation of which, I offer you and the colony my most cordial congratulations; believing, as I firmly do, that the objects which that association has in view, are not only reconcilable, but identified, with all its other interests, more especially those of its merchants and fishermen; and that, in proportion as they are successfully carried out, they must have the effect of advancing and promoting those interests to an extent to which it is not possible to assign any limitation.

"Entertaining these views and opinions, I shall not only deem it to consist with my duty towards her Majesty's subjects of this island, to urge them upon the consideration of the local legislature, whenever her Majesty may be pleased to authorize me to convene it; but I now invite the support of all classes of the community, for an association, to the successful attainment of whose enlightened and patriotic objects, I cannot but look as to one of the principal means of ultimately placing this island in its just and proper position, as one of the brightest and most valuable gems of the British colonial diadem.

"Gentlemen,—My object in presenting myself here this day, is to make this declaration of my sentiment, in regard to the objects of the association now about to be formed, for the promotion of agriculture in this island, and thus, publicly, to pledge to it every degree of encouragement and support which my position, as the representative of the sovereign, may enable me to extend to, or to procure for it. Having done this, and with my invitation to you freely to make known to me, at all times, in what way you may be of opinion

that any influence which I may possess may be most beneficially exerted in the advancement of any of the objects of the society, it appears to me, that the freedom of the discussions about to be entered upon may, perhaps, be best promoted by my withdrawing. But before I do this, I will avail myself of this occasion to make a communication to this numerous and respectable assemblage, which cannot, I think, fail to afford them a degree of gratification proportioned to the attachment which they bear to the country of their birth or their adoption.

"The only claim which, individually, I can as yet have acquired upon the good will of the inhabitants of this colony, must rest upon the desire which I have felt from the first moment of my arrival in it, and the consequent efforts which I have used, in all my communications with the queen's government, to convey a fair and just estimate of its varied capabilities, and of the intelligence and ardent loyalty of its inhabitants; and this I have done, not only from a sense of public duty, in order to do justice to the island, but from the conviction that the maternal government of her Majesty

only desires to be correctly informed in what those interests consist, promptly to evince a disposition to promote them. Accordingly, I have now the satisfaction of publicly announcing that I have received recent assurances from the distinguished nobleman and statesman who presides over the colonial department of her Majesty's councils, and whose warm interests in, and extensive acquaintance with, colonial affairs, are known to you all, that he has perused my statements with interest and satisfaction, and that I may rely upon his cordial co-operation, and that of his colleagues, in any measure which may hold out a reasonable prospect of developing and increasing the resources of the island.

"Gentlemen,—We can desire no more; let us only be true to ourselves, and the course of the prosperity of our island is this day begun."

Just as this work was closing, intelligence has been received that one of the most enlightened of the colonial ministers of Britain, (Lord Stanley,) approves of the sentiments contained in this speech. This is, indeed, the dawn of a new day to Newfoundland, and it is

no longer a high crime and misdemeanour to assert that it is a colony of Great Britain, capable of taking its place with those adjacent to it, and of sustaining a resident population. Lord Stanley's knowledge of colonial affairs, nobody will dispute, or pretend to combat, in such a province, where the poor fisherman would have starved but for the support of the soil during bad fishing seasons; and that support has only to be brought home to him by small grants of land, to render his existence more sure and happy.

Indeed, the best of the modern writers who have noticed this colony, echo the sentiments expressed at its first settlement by Hayes and Whitbourne, and the most influential of the merchants have joined the agricultural society, and contributed largely to it.

M'Gregor, in his excellent work on the "Colonies," everywhere asserts the capabilities of the soil.

Montgomery Martin, in 1834, says:—"Although a great part of the island consists of plains, studded with rocks, and termed 'barrens,' there is a considerable extent of alluvial soil, capable of growing wheat .and

other grains; springs of fresh water abound everywhere, and the island is well adapted for the pasturage of cattle on an extensive scale. Martin did not know when he wrote, that the word "barrens," in Newfoundland simply means places denuded of forest. Some of the barrens round St. John's are the best ground of any in its vicinage, and the best cultivated." Again he observes; "Agriculture is extending annually, and, in general, it has rewarded the toil and labour of the careful and industrious husbandman. The land might be made extensively useful in grazing farms; and as potatoes can be raised with much facility, hogs may be fed with success after the country has been more and more opened."

In the "Edinburgh Cabinet Library," published as late as 1839, by very eminent writers, who have taken great care to obtain correct information about the colonies, the same facts are advanced, and hints are given, that when the more fertile or western portion of the island shall be occupied, Newfoundland will afford means for encouraging emigration.

In fact, the prejudices against Newfoundland are fast wearing away, and future genera-

tions will see that the fishery and the soil will combine to render it as important as its better known and better treated sisters. They, too, had to struggle against climate and against prejudice, in the early times of their attempts at agriculture.

PART II.

NATURAL HISTORY.

CHAPTER III.

GEOLOGY AND GEOLOGICAL RELATIONS.

THERE can be nothing more fatiguing to the mind, when it is engaged on so comprehensive a subject as that of developing the resources of an unknown region like Newfoundland, to be fettered and embarrassed with the shackles of dry detail; and yet, if the reader of such a work does not obtain all the information which it is in the power of the author to give or to collect, he turns away from it with disdain, and observes that more might have been done, " considering the time and opportunities of the writer."*

* As has been said, in a critique by a leading paper in Canada, upon the " Canadas in 1841," and in that valuable periodical, " The Athenæum."

In placing before the British public a recent attempt to draw its attention to the state of Canada, I chose what I thought the best mode of administering a dose of information upon that splendid colony, which it struck me my countrymen were sadly in want of, in order to render their opinions more sound and healthy. In that work I abstained, as I have done in the present, from entering into abstruse political dissertations, or from closely noticing subjects which have arisen from violent party feeling, and which time, and evidently the self-interest of the country, can alone subdue. Neither the "family compact," that bugbear of Upper Canada, nor the somewhat misrepresented state of the mass of the Lower Canadian French population, were touched upon otherwise than lightly, and the whole aim was, in as agreeable a manner as possible, to enlighten the British "*at home*," by giving them a book which was not fatiguing to read, and might be taken up or laid down at any chapter, whilst it was the nucleus of further and more comprehensive information.

In this work, however, the treatment must be somewhat different; there is not the same field, and there is also so little known of the

natural, moral, or political history of Newfoundland, that I must necessarily enter more largely upon each of these important topics.

In the state of present information about Newfoundland, there are few or no consultable works besides those necessarily limited notices of the island in the able compilations of Martin, of M'Gregor, and of the "Edinburgh Cabinet Library." "The Legal History," by Reeves, is out of date, and probably out of print, and the interest excited by it at the time of its appearance in 1793 is gone by; nor is it now a work of anything more than reference, being confined exclusively to a dry historical legal detail.

Lieutenant Chappell, of the Royal Navy, who wrote an account of a voyage in the Rosamond, in 1818, produced a small book, which contains much desultory observation, and is very amusing, but beyond that offers little to add to the information now sought after.

In 1819, the Rev. Mr. Anspach gave the public a more voluminous work, one of the very best which has been written on the island; and it was followed by the "British America" of M'Gregor, in 1822, and by Montgomery

Martin's "British Colonies," in 1834, and other similar works of reference, down to the "Edinburgh Cabinet Library," which contains the best and most interesting, but very short relations of this colony.

None of those writers, however, possessed the requisite facilities, in the colony itself, for developing its resources, and some of them agreed in devoting it to the purposes of a mere fishing station.

That Newfoundland possesses merits far beyond such a destiny, and is about to assume a very important position as a British colony, it is the object of the present writer to prove; and he hopes to interest his countrymen in its welfare, as a vast adjunct to the growing empire of Britain, in the adjacent territories.

In modern science, nothing is advanced, with any prospect of exciting attention, but that which is founded on fact; "the art and pratique part of life," being now, happily, "master of the *theorique*." In order, therefore, more fully to shew the capabilities of Newfoundland to support a numerous population, it will be necessary to take a review of the known circumstances relating to its geo-

logy, in combination with those of the neighbouring provinces.

GEOLOGY.

Geology, long totally neglected, having become a fashionable science, a military writer may presume to dabble in it, although running the gauntlet of some few ultras, who may choose to designate him as a "picker-up of pebbles."

I conceive it very fortunate, however, when the chances of service throw me upon a country whose resources are comparatively unknown, or hitherto unheeded, and more fortunate still, that the bias of my inclinations sways me ever to endeavour to penetrate into the hidden mysteries of nature. But I neither pretend to abstruse geognostic knowledge, nor to anything more than having advantageously pursued inquiries into the formations of Canada and the Gulf of St. Lawrence—I say, advantageously, because there are few persons, hitherto, who have commanded the same opportunities; and having seen and studied the country from Labrador to Upper Huron, it affords me facilities to inquire concerning the still less known features of Newfoundland.

Hitherto, indeed, except having observed some little of the coasts, I am pretty much in the predicament of all who have written on this island before me, and have not, it is true, extensive local knowledge,—which it is impossible to obtain by any one, unless the locked-up interior of the island be opened under the fostering care of the British government. But, happily, for the first time since Cassini visited these shores, to make experiments upon Le Roy's "Timekeepers," as they were then called, in 1768,* a spirit of inquiry has been abroad on this interesting subject, and the legislature of Newfoundland, so recently organized, having adopted it, although with inadequate means, a gentleman from England, now employed similarly in South Australia, was actively engaged in investigation during the summers of 1839 and 1840, on various parts of these extended coasts. He was not, however, enabled to penetrate into the vast solitudes of the interior, and, in fact, has been but very little beyond the

* See an English translation of "Cassini's Voyage to Newfoundland, in 1768," printed with "Chappe D'Auteroche's Voyage to California to Observe the Transit of Venus in 1769. 8vo. London, 1778," (somewhat scarce now.)

circuit of the shores, excepting a limited excursion from St. George's Bay, on the western flank of the island; and he was then, confessedly, not deeply acquainted with mineralogy.

Differing from Mr. Juke's views, in many particulars, I shall now take his report to the legislative bodies, with everything else upon the subject I can gather, and, condensing all with personal observations, avoid entering upon deeper disquisition, which must be reserved for another opportunity, in a work more exclusively devoted to the science, and which will embrace Canada.

The island of Newfoundland is divided by Mr. Juke* into two sections, which, in the map accompanying this work, would be shewn by a line drawn from Cape Ray, the south-western angle of the island, to the head of the Bay of Exploits, on the north-eastern central shore.

On the south of that line, all, he says, "from Dan to Beersheba," is hopeless and barren; whilst to the north of it there is a land of promise, not flowing with milk and honey, but abounding in forest and fell, in coal and

* Mr. Juke's Report on Geology to the Legislature of Newfoundland, 1839-40.

iron, in limestone and gypseous deposits; in short, granite and infertile rocks are the sole productions of the desolation which this writer attributes to one-half of this splendid island, and his misgivings are great about his visions of the other.

I fear, or rather, I hope, that Mr. Juke has been, as most young authors are, a little too hasty in this generalization, and that whenever the British government may be induced to patronize discovery, much will be found in the interior or central portion, as well as in the south-eastern half, thus somewhat hastily condemned to ever-during sterility, which will not only be fitted for agricultural purposes, but develop likewise mineral treasures and resources; for many of the formations in which these exist elsewhere have been also seen here.

In the United States, in Nova Scotia and New Brunswick, great have been the pains taken by the respective governments to develop the geology of those vast territories, and great has been the result; whilst in Canada and Newfoundland the crust of the earth remains unbroken, and its riches wholly unknown.

Canada, it is true, has now the means of

bestirring herself, by the powers and resources attained by the united legislative functions; but Newfoundland must slumber in obscurity, unless the parent state holds out her hand in assistance, and is convinced that it is rather unbecoming to be in total ignorance of the nature of an island which is the nearest of her colonies to herself, and the stepping-stone to, and fortress of, all the rest in transatlantic Britain.

Science has derived incalculable benefits from the expensive and dangerous expeditions to discover a passage to the Spice Islands and to the tea-growing empire, and to open up a direct communication with India, and thereby enable Russia to get nearer to it by the frozen regions of the Arctic circle; yet one half of the sum required for even one ship on these repeated experiments upon a route which can never be useful, except to Russia, would make the oldest province of all our colonies in the whole world a source of profit and of renown to England.

But to resume the inquiry. To the east and to the south of Newfoundland there are, no doubt, a series of undulating ridges, running N.E. and S.W., or thereabouts, in parallel

lines to the almost unvarying directions of the great intersecting bays. This shews plainly that the disturbing force evidently acted in that manner, by a series of upheavings, pushing, as it were, the one before the other, like great waves, and continuing all over the space occupied by the banks and shoals of this part of the Atlantic, and far into the interior of the adjacent continent.

On the shores extending to Notre Dame Bay, the rocks are sandstone and slate, of an early class, few or no fossils appearing amongst them, intermixed with trap rocks and with granites and serpentines, with mica-schist, and, in fact, with all the early mineral masses; excepting that there is a deficiency of limestone, and a superabundance of the igneous classes, as might be expected; whilst the alluvial or diluvial covering is arenaceous, intermingled with a few boulders, and spread over with shallow peat bogs, of very small depth, but of great consistency, giving food to an immense variety of coarse mosses, natural grasses, recumbent shrubs, and low berry-bearing plants, wherever the secondary stunted forest has disappeared, or has not had soil enough to encourage either it or the larger primeval woods.

In this large section, or one-half of the island, Mr. Jukes says, "neither minerals of value, ores, lime, nor building stone, will, in all probability, be discovered."* He forgot that granite is a good serviceable article in its way, and that amongst the conglomerates of what I conceive to be the greywackes of this extensive district, tough but excellent blocks may be quarried, whilst amongst such enormous masses of sandstones as are connected with this class of rocks, it will no doubt be discovered, that many may yield to the hammer and to the chisel or point, without flying into chips or large splinters, as those of the coast of St. John's have been usually found to do.

Of slate there is an abundant supply, and whenever this rock, in its alternations with the sandstones and conglomerates of the greywacke, reaches the surface, its rapid disintegration, under the magic influence of the

* He, surely, when putting Mr. Cormack's discoveries on the map of the island, forgot that that gentleman saw and stated the positions of the metallic rocks in the part of the interior he passed over, as well as the red sandstones and serpentines, the sienites and greenstones.

severe winter frosts and thaws, and the great heat of the short summers, with the rains of the latter autumn and early spring, causes fertility.

That there are ores is certain; much pyritical matter is found to the north of Bonavista Bay, and I have an excellent specimen of the red oxide of iron from near Harbour Grace, in Conception Bay.

A copper-mine* was worked, or rather at-

* Vide Journal of House of Assembly, Appendix. Many fruitless attempts have been made to extract the ore which is dispersed in the rock.

Anspach says that Conception Bay has always been understood to contain mines of several sorts, and that at Chapel Cove, at the head of that bay, there is a coal-mine. A lime-kiln was also erected with tolerable success, some years ago in that neighbourhood. He says there is an iron-mine at Back Cove, on the north side of the island of Belle Isle, in that bay, and another on a high hill, called Lookout, at the back of the town of Harbour Grace, with two remarkable mineral springs—one near Stretton's Farm, on the east of it, and the other half way from the church to River-head, on the road.

Shoal Bay copper-mine, near St. John's, was first opened in 1775, by some Cornish miners, but has never paid its outlay.

Captain Cook, the immortal navigator, assured Dr. Forster that there were several fine coal-mines on the

tempted to be worked, from an early period, at Shoal Bay, near Pettey Harbour, about twelve miles from St. John's; and a medical man in this capital, who was a surgeon in the royal navy, and is now president of the Natives' Society, and takes much interest in the de-

island, and that in situations where the coal might be most advantageously shipped on the coast.

The Catalina stone found between Cape Bonavista and Trinity Harbour is a solid yellow iron pyrites, and was the fire stone of the Red Indians, emitting sparks when struck or rubbed, like flint. There is plenty of it close to St. John's, near Middle Cove, at a precipice on the shore, called the Silver Mine. Frobisher and Gilbert were both deceived by this gold and silver. The former visited Trinity Bay as early as 1576, and the strait he talks about is that bay which, on the three charts of Ortelius, in the Theatro del Orbe de la Tierra, dated 1587, is so represented. Sir Humphrey Gilbert, seven years afterwards, notwithstanding his having "an expert Saxon miner" with him, was induced to load his vessel with the flattering ore. Catalina cliffs, like those at Charmouth, in Devonshire, often take fire, owing to the decomposition of the pyrites, and probably contain alum shale; but they have not been investigated by any person capable of describing them.

Good marble, of a pure white, has lately been brought in specimens from Canada Bay to the northward.

velopment of the resources of this country, has informed me that even on the desolate coast above mentioned, at a spot not twenty miles from the city, between Pouch Cove and Flat-rock, in Torbay, are two considerable ponds, or little lakes, as they would be called in Canada, from the highest of which, in point of level, a little dribbling rivulet discharges its waters into the lower one, and over which the wild path from Torbay to Cape St. Francis leads; and that the rocks in the neighbourhood of this rivulet and the lakes are coated with sulphate of copper, indicating a deposit of that metal, which also scums the waters.

This gentleman, Dr. Edward Kielley, discovered also, in 1830, at Log Bay, a small and very romantic fishing station, about four miles from St. John's, a very powerful chalybeate spring; and, finding the water very efficacious in particular cases, having been, in short, the means of restoring a very debilitated patient, whose vital powers were rapidly sinking, to perfect health, he sent a bottle of it to Dr. Herepath, of Bristol, to be analyzed. The opinion of this chemist I have judged it proper to annex, as such a discovery is highly im-

portant in the immediate vicinity of this rising city

* *Sample of chalybeate water from Newfoundland:*—

Specific gravity at 62° Fahrenheit... 1,000016

Solid contents in an imperial pint of 8750 *grains:*—

1.	Chloride of calcium	·0419
2.	Chloride of magnesium	·0400
3.	Chloride of sodium (common salt) ...	·3984
4.	Sulphate of magnesia	·0400
5.	Sulphate of soda	·0713
6.	Carbonate of magnesia	·0334
7.	Silica	·1167
8.	Vegetable extractives	·1717
9.	Bi-carbonate of iron	·0450
	Decimals of a grain	·9584

It will be seen that the total solid contents of an imperial pint of this water do not weigh one grain: this is less than I ever met with in any water. They are all common to spring water, except the first, eighth, and ninth; the latter it is which will give a character to the spring. It is chalybeate to rather a greater extent than the water of the King's Bath, at Bath, England; the King's Bath is the principal spring of the Bath waters. The Newfoundland spring contains $\frac{45}{1000}$ of a grain of this bi-carbonate in a pint, the Bath spring, $\frac{30}{1000}$; and the chloride of calcium (or muriate of lime when in the water) will contribute to the tonic effect of the iron, while the sulphates of soda and magnesia, although not in sufficient quantity to produce aperient effects, may prove enough to prevent the action which chalybeates have on some constitutions. Upon the whole,

But, as will readily be conceived from the geological map which is appended to this work, and which was first constructed more than a year ago, from the observations and evidences of travellers, and from the report to the House of Assembly already mentioned, the formations of the Atlantic coast of Newfoundland are certainly, at present, not very promising, though intensely interesting to the speculative geologist.

It is to the space within the belt (mentioned by his Excellency Sir John Harvey, in his speech to the Agricultural Society) which girds that coast for some few miles; it is to the vast and equally unexplored interior; it is to the western coast, particularly that of the St. Lawrence; that we must chiefly hope to

I should say that the water might be used with advantage as a general bracer, if arrangements could be made for the accommodation of invalids near the spring; for it must be remembered, that where iron is sustained in water by carbonic acid, as in this case, there is always a tendency for it to fall down as insoluble carbonate of iron, leaving the water without its chalybeate properties.

WILLIAM HERAPATH.

Mansion House, Old Park, Bristol,
September 9th, 1836.

draw the attention of the political, geological, or general reader;—and here we find, on the one hand, that within that mysterious colossal wall which bounds the eastern and southern shores of Newfoundland, there are vast forests, not, it is true, composed of such splendid timber as in Canada, but still very fine; and also vast regions adapted to cultivation.

On the western side of the island,—as might have been prophesied by any, even the most casual, observer of the formations of Cape Breton and the adjacent countries, of Cook's survey of that coast, or of the conformation of the shores,—exists the secret which is not yet fully unveiled. Here, amidst profound solitudes and vast prairies, forests, and innumerable large lakes, we find the grand mystery almost brought to light; of the continuation of the coal formation of Nova Scotia and Cape Breton, the great coal basin of the St. Lawrence, probably the largest in the world, reaching from the Gaspé territory, on the one hand, and covering a vast portion of Newfoundland, on the other.

But before we follow Mr. Jukes in his observations, without attending to his generalizations, we will take a stride along the island

coast, and along his very short route into the interior, by an Indian path only, and continue our review so as to embrace Cape Ray and the Bay of Islands.

Former visitors on this part of the coast, beginning with the French navigators and with Cook, asserted, as Mr. Jukes has proved, that coal, gypsum, iron, limestone, marble, the freestones for building, and, above all, good land and good timber, are stored or exhibited largely here; and the fish are abundant.

After passing Cape Ray, the gulf shore of Newfoundland exhibits ranges of mountains, running in the usual direction in this region, N.E. and S.W., or with little variation from those points, shewing that the same causes of disturbance in their formations exist everywhere in the island.

These ranges proceed very far up the western coast, and with occasional lofty offshoots which reach the sea, are usually so distant from it as to leave a belt of comparatively level country, of considerable width, through which the small river-drainage takes effect.

Beyond these ranges, to the eastward and northward, the country is covered with rivers and lakes of great extent, and is of course well

drained by them, in a vast area reaching almost to the Atlantic cliffs on the east; and there is, therefore, water communication, with few interruptions, both from St. George's Bay and the Bay of Islands, to the northward and eastward, through St. George's River, the Great Humber River, the Grand Pond, the Red Indian Pond, and other series of extensive lakes (rivers being called brooks, in Newfoundland, and lakes, ponds,) to the Bay of Nôtre Dame, on the eastern shore, and that of Exploits and White Bay far northward.

It is within the space thus drained by lakes, rivers, and streams innumerable, that the great coal basin of Newfoundland, Nova Scotia, and Cape Breton, terminates eastward, covering a country of immense extent, abounding with everything requisite for settlement, and possessing a climate far less humid and severe than that of the Atlantic shores of this celebrated but neglected island.

Again, on the littoral, backed by the chain of coast mountains, extending from Cape Ray to St. George's Bay, over an average breadth of twenty miles of a comparatively level belt of land, the coal strata crop out; and here and there gypsum and limestone, those valuable

articles to the farmer, almost totally wanting near the capital, may be obtained in any quantity; whilst, farther north, about Port-au-Port and the Humber river, marble of excellent quality exists abundantly;* and there are appearances of the edges of the coal-basin, even in the Bay of Islands, promising a rich deposit.

To shew that the coal is similarly situated with that on the opposite side of the gulf, in Cape Breton and Nova Scotia, we find the rocks associated with it, and on which it reposes, exactly the same, whilst the quality of the coal, in the specimens I have seen of it, appears to be perfectly alike in all.

As is the case in the Nova Scotia and Cape Breton coal-fields, the geologist meets with all the rocks, from sandstone downwards, in the transition and primitive classes, with those of evident igneous origin; so, on the western coast of Newfoundland, where the coal-fields lie in the same axis or line, proceeding from S.W. to N. E., we find the same rocks and the same

* This beautiful white marble of the primitive class again comes out on the opposite or Atlantic coast, in Canada Bay, where coal, also, it is said, has been lately observed.

appearances, the same gypsums in equal abundance as in Cape Breton, the same briny springs, and the same indication of the ores of iron; and all this protected from the fury of the whole surging force of the Atlantic, on the south and east, by a bulwark of the great transition and early rocks, amongst which it is frequently difficult to define their limits, or to distinguish them from those which have been forced up amongst them by subterraneous action. Indeed, so exactly do these ranges resemble each other in their outward characteristics, that it was not until after many years of study in Canada, that country of trappose and igneous rocks, I was at all led to believe that most of the granitic compounds are of igneous origin; and through the vast extent of country from the eastern shores of Newfoundland to Lake Superior, it may be very questionable whether there exists, in mass, any true primitive and unquestioned granite, or whether the modern scheme of transition and secondary granites may not at once be overturned by yielding to the apparent facts in that immense region, where, although shells have certainly been seen in the granitic rocks, yet they were evidently placed there by

the result of fusion, and the masses they are found in at Kingston are as evidently not of the primæval or ancient granitic compounds.*

It is now well known that many of the granites (so called) are of a later age than their venerable primæval equivalents, and, as far as I have seen the coast of Newfoundland, I am inclined to think that the early rocks are of that class which shews itself so distinctly amongst the thousand islands of the St. Lawrence and at Kingston.

Bounded, however, by these impenetrable barriers, over which tempest and deluge, hurricane, earthquake, and fusion, appear to have united their terrific agencies in the first ages, and to have swept everything else away, in hollowing out the great channels of the Bays of Conception, Trinity, Bonavista, Notre-Dame, and White Bay, the immense coal-field of Newfoundland has been left protected and ready for the hand of man whenever circumstances may call, which they very soon must do, for the colonization of the western coast and its interior.

* I have collected a series of facts on this subject, which would have been added to the Appendix, but it is too bulky, and will be better in a separate shape.

Mr. Jukes represents the littoral chain of mountains on this western coast as rising in some points to a considerable altitude, and as forming a sort of ridge composed of gneiss, mica slate, chlorite slate, quartz rock, and granite, upon whose vast sides repose the superior stratified formations, dipping higher or more evenly, as the disturbing causes from below have acted upon them.

Part of the great Newfoundland coal-basin, as we have already observed, is situated on the belt south of St. George's Bay, between those mountains and the Gulf of St. Lawrence, and the beds of the carboniferous rocks here preserve a general uniform parallelism with the usual trending or direction of the coast, or N. E. and S. W.; but at Cape Anguille they are broken and disturbed, and thence, southward, alter their direction to N. and N. W. to the great Codroy River. The sea-shore is here, from Cape Ray to Cape Anguille, steep and dangerously stormy at times, and there are no good harbours till the Bay of St. George is reached; so that until this iron-bound shore is better known, it would be fruitless labour to explore the coal which exists up the Codroy River, and in this region commerce must

probably confine itself for the present to the gypsums, with which it abounds, or to the red sand-stones, adapted for building; for the lower beds of the coal formation being well exhibited in Codroy River, we may reasonably expect a good supply of building materials thence, particularly as we know that fine flagstones have been met with, of which, with squareable sandstones, the eastern part of the island near the capital is, to all present appearance, destitute.

In the centre of the south side of St. George's Bay, near Crabb's River, the lower portion of the carboniferous rocks runs along the coast, and consists there of alternations of red marl and sandstones, the beds usually dipping to the N. W. at 45°. But three miles inland, a ridge has upheaved these beds, and they dip on its inner face in the opposite direction. Mr. Jukes imagines, that owing to this circumstance at least six miles of country in width from the coast must be passed, before it is likely that the higher beds, in which the coal is deposited, will be reached. He penetrated this belt of land in various ways, by the rivers, but the means and time at his disposal were both inadeqnate for long land journeys, and he

found, at eight miles from the Gulf shore, a bed of coal, already known to the Micmac Indians, of three feet in thickness, and of excellent quality; and his guides, who were of the same tribe, explained that up the Codroy River, in a similar parallel, the beds were equally valuable, and that brine was also plentiful in several of the adjacent rills.

From very fair data Mr. Jukes calculates the extent of this small portion of the coal-basin of Newfoundland at about twenty-five miles wide by ten in length.

The north side of the great Bay of St. George, between Cape St. George and Indian Head, is better known, as there are both white and Indian settlers. It is composed of magnesian limestone, dipping at a small angle to the N.N.W., and passing under the shales and sandstones of Port-au-Port.

At the mouth of St. George's River, which is heavily barred, Mr. Jukes observed a most singular specimen of trap-rock, composed of hyperstene, with small fragments of Labrador feldspar in some places, and of basalt and hornblende crystals in others.

Mr. Jukes crossed from St. George's Harbour to the Grand Pond, and is the first person

capable of giving any opinion on the formations who has visited that singular region; but here again his time and means failed him, and he was obliged to hurry through the best, and indeed the only part of his mission which promises to be of great interest hereafter. The country was so covered by diluvial *débris* and by woods, that he did not ascertain its structure, having neither opportunity nor assistance to deviate from the Indian path to the Lake.*

The Grand Pond, or Lake, was at first bounded by gneiss and mica-slate. The island, twenty-five miles long, which cuts it, at its western end, into two parallel slips, was composed, at the extremity next the St. Lawrence, of chlorite slates; but its central portion, and the main land on each side, was of granite, or, as I rather suppose, from the description given, of igneous granitic masses, of a sienitic character. Its northern end was a conglomerate, but of what kind or age we are not informed.

* If he had carried the agricultural probe, invented by Captain Baddeley, R.E., with him, he might have ascertained the nature of the subsoil, however thickly it might have been covered by leaves or *débris*.

This highly-interesting lake, which, ere long, will be surrounded by a busy race, is sixty miles long. For want of a proper birch canoe, or some other equally light and safe conveyance, such as those used in the government explorations in Canada; for want of tents and bearers; for want of provisions; in short, for want of proper government support, this geologist, who was merely paid a small annual salary, was unable to explore it, and appears to have had his exertions paralyzed at the very point where his labours would have commenced with intense interest.

He saw, it is true, immediately opposite the eastern end of the island,—which is no less than twenty-five miles long, as we have already said, and is evidently a mere ridge of the upheaved rocks, lying in the usual parallelism,—that the main shores were composed of beds of very white rocks, and that huge cliffs, of a bright red colour, were apparently lime and sandstones; but his boat was of too fragile a construction, and too small for him to venture to approach their bases, owing to the strong winds prevailing at the time, and to the height of the waves.

Mr. Jukes was also unaccompanied by any

person used to astronomical observations; so that the bearings of the lake and country, the latitudes and longitudes, remain unnoted.

If Mr. Jukes had had the outfit usually provided by government, in Canada, to the officers of engineers, and persons of the surveyor-general's department, who are there most judiciously employed very frequently in exploration for new settlements or for geographical purposes, the winds and waves would not have deterred him, as an encampment for nights would have been a mere nothing, and the Canadian canoes live on the swell of the mighty Huron;* whilst the Micmacs who inhabit St. George's Bay, and other parts of the coast, must be capable of managing a canoe equally well with their Canadian brethren, passing, as they do, their whole existence in hunting and fishing.

A journey across the country from St. George's to Placentia Bay, would be considered as a trifle by persons accustomed to Canadian bush-ranging. It is not more than

* I have been in a three-fathom canoe, or one eighteen feet long, with the Indians, on Lake Huron, which rode over waves of a dimension seldom seen, unless in storms on the ocean, with perfect security; but they require nice management.

one hundred and fifty or two hundred miles in distance, with all the difficulties, and should certainly be undertaken, as will hereafter be recommended.

A little to the eastward of this part of the lake, Mr. Jukes found the cliffs precisely the same as those of the carboniferous rocks on the south side of St.George's Bay, already described, and that this formation constituted all the cliffs of all the shores of that part of this extensive lake, east of its island. The general dip was easterly, and slight; and in the north-east angle of the lake were found various pieces of coal, and a good section was viewed, in which some of the carboniferous matter resembled the valuable cannel coal of Britain.

In the river, or brook, as the rivers are styled in this country, above the lake, large lumps of excellent coal were seen, and there was every indication of thick beds of this mineral, but the country was so densely covered with forest, and the opportunities and means so bad, that nothing like a fair examination of it could be obtained. The Indians, however, know of a bed of coal three feet thick on this river.

Here, then, the grand discovery was made, partly from actual observation and partly

from the experience of the hunters, that the coal-field of Newfoundland extends to the immense levels N.E. of the Great Lake; that the carboniferous beds then become more horizontal and regular; and that no doubt can exist that an inexhaustible supply within reach of water communication is deposited between and around the Grand Pond, St. George's Bay, and the White Bay, and Bay of Exploits, whilst indications of its vicinity to Bonavista Bay have for many years been observed.

Leaving the attempt to explore this region, thus feebly made, for the present, let us return to the Bay of St. George. Northward from it to the Bay of Islands the coast is well known, and exhibits the refractory shales and sandstones of the east coast of Newfoundland, intermingled with the igneous rocks, whilst at one place the red sandstone of the St. George's coal-field has been casually noticed; and even from the early days of the French and of Captain Cook, this coast has been imagined to be stored with that valuable mineral.

At the mouth of the Humber River, vast precipices of the finest white marble of the primitive class are discovered, and in situations, too, where they afford facilities for

quarries of any magnitude, within a convenient distance for shipment to vessels lying in the Humber Sound.

The Humber River, leading to Deer Pond, or Lake, is crossed, near its mouth, by a ridge of the early rocks, and the lower end of Deer Pond is belted by hills of gneiss and mica slate.

At the middle of the Deer Lake, the hills of the early rocks are less in altitude, and here again begins, towards the upper end, the more level country, and the carboniferous series of the Newfoundland coal formation.

Wherever this formation commences, the travellers and hunters have observed that the country possesses, as might be expected, every facility for agricultural purposes, and that wherever its vast forests admit of openings, either from natural or accidental causes, there springs up a luxuriant covering of grass.

The settlers on the shores of St. George's Bay and the Bay of Islands—for there are many, in spite of all the treaties between England and France, who live on the produce of their farms, etc., and those in the coal-fields all round the Grand Pond and throughout this immense section of country,—all agree that the

timber here becomes larger and more varied than in any other part of the island.*

The Bay of Islands has long been known as a fertile resource for the shipbuilder, and it is also known that the whole coast northward, to the beautiful double bay of Ingornachoix, is equally capable of supplying timber for this purpose. Mr. Jukes saw the fir, pine, ash, beech, birch, and juniper,† in the interior; and every portion

* Bouchette, vol. ii.; M'Gregor, vol. i.; "Edinburgh Cabinet Library," vol. ii.; and verbal communications.

† We must not confound the juniper of Newfoundland with the species common in Kent, and other parts of England, which is a low, humble shrub, common enough here also, and from whose berries gin derives its flavour; the shipbuilder's juniper of Newfoundland is a true larch. The American tree-juniper is the red cedar, or juniperus Virginiana, an evergreen, which produces a very durable timber, but seldom grows large; it is scarcely known in England, as a heavy duty by weight is laid on its importation. In Upper Canada it flourishes, but has been almost annihilated by the Americans, who seek it eagerly, from its durable qualities. A foot in diameter is reckoned very large if the log is twenty feet long; leaves in threes, adnate, spreading. It is frequently used as fuel, but is said, though perhaps erroneously, to cause abortion, from the pungent odour of the smoke, which is very powerfully perfumed. The common juniper

of the country, about the Humber, which he visited was densely covered with fine woods.

Dr. Chappell, in his voyage to Newfoundland, visited St. George's Bay, and describes the St. George's, or Main River, as a broad and tolerably deep stream, with a heavy sand-bar across its mouth, over which the sea breaks in a tremendous manner. "Its banks are composed of loose earth, covered with various lichens, and surmounted with noble forests of black and white spruce, larch, fir, and birch trees." The river abounds with salmon and trout, and the surgeon of the ship he sailed in says that the country is so healthy, "I do not remember observing any acute or even chronic diseases amongst them."

The little colony of whites and Micmac Indians has now become so numerous that it has attracted attention, and in the visit of the Cleopatra frigate, commanded by Captain Wyvill, R.N., last year, was found to be des-

is of two kinds—one a shrub, two feet high; the other, about six inches: the first, juniperus communis, depressa, the gin juniper; the other, juniperus sabina, or savine, which grows in the clefts of rocks all over Newfoundland and Labrador, and yields a strong, wholesome, hard berry, used in making spruce beer.

titute, not only of religious but of mental instruction, which is about to be applied.

From all the information I can obtain respecting the coast about St. George's Bay and up the Bay of Islands, as well as the interior, which is chiefly known to the Indians and fur seekers, there can be no doubt that that portion of Newfoundland is well adapted to support a large population, and to be equally capable of cultivation with the adjacent parts of Cape Breton and Nova Scotia, or even more so; whilst it enjoys a milder climate, and the immense advantage of several water routes of communication with the Atlantic shores of the island, and with the great indenting bays of the north and east.

For very many years the Micmac Indians, with their accustomed sagacity, in migrating from the neighbouring continent, have domiciled themselves, or rather placed their headquarters, on the western coast of Newfoundland, or on the south-west shore, where they are sure of support, either from the soil or from the sea, and where by rivers and lakes they can easily penetrate to the interior hunting grounds. They are seldom or never, I believe, observed on the eastern shores, where their

hunting would prove more precarious, where the white man chiefly dwells, and where the winter is extremely boisterous, uncertain, and severe.

All the persons who have visited the west coast bear testimony to the comparative comfort in which the settlers, who remain on the French fishing shore, exist. The aspect of their houses puts the traveller in mind of those of the small farmers in England; and yet these simple, industrious, and isolated people are denizens only by French sufferance, instead of being able to claim the birthright of British subjects on a British island.

Enough has, I trust, been said, without going into dry, geologic detail, to prove that Newfoundland is capable of sustaining a large population on its western side, and that that side is vastly superior to the eastern,—which is not, however, the barren desert it has been represented to be, as will hereafter be shewn; and that, if both were settled as they ought to be, a mutual trade in the necessaries of life would result; whilst protection to the fisheries, the command of the Gulf of St. Lawrence, and absolute control of the coal

fields of Nova Scotia, Cape Breton, and Newfoundland, would be achieved.

An enterprising gentleman, of the name of Cormack, penetrated, at a short distance parallel to the coast, into Newfoundland in two directions, on the north-east shore, in October, 1827. He entered the country by the north-west arm of the River of Exploits, and crossed, by a north-westerly direction, through an "almost uninterrupted forest" for eight days, to Hall's Bay; and thence westward, for five days, to the mountains south of White Bay, and in sight of those which tower over the Bay of Islands, on the east coast of Newfoundland.

Here the country began to expand into vast levels for thirty miles; and the traveller, by the middle of November, thought it time, after taking a most extensive bird's-eye view from the lofty range, to descend to these marshy levels, and during a most laborious transit through them of ten days, discovered the mystic lake of the Red Indian, and returned by the River of Exploits to the Atlantic, the whole journey occupying thirty days, and extending over two hundred and twenty miles.

He made no important geological disco-

veries, being but very little acquainted with that science; and as he had to subsist upon game, and his object was to see the Red Indians, in which he failed, there is little to interest the reader as to the subject of this section of his travels, until we come to treat of the aborigines.

Mr. Cormack observed, however, an enormous block of Labrador feldspar, nearly four feet and a half in length by three in breadth and thickness.

But this gentleman's most extensive journey was made in 1822, when he actually crossed from Trinity Bay to near St. George's Bay, by keeping a nearly parallel line to the south coast, at a considerable distance from it, so as to avoid the frequent crossing of streams.

This was a most perilous undertaking for a person unsupported by government, and attended only by two Micmac Indians—one not even met with until he reached the middle of his journey—and provided only with his gun and a pocket compass. He went from Random Island, (not a bad name for his starting point,) in Trinity Bay, at a place called Smith's Sound, early in the month of September, so as to avoid the plague of flies and mosquitoes as much

as possible, which is as intolerable in Newfoundland as in Canada, in hot weather. He then boldly launched upon his self-adopted journey.

The Indians and the traveller were often put to great straits for want of sufficient game, as they depended entirely for existence upon finding it; and they did not reach the west coast until late in November, and then nearly without clothing, which had been destroyed in penetrating the woods.

Mr. Cormack found, as the map exhibits, the belt along the coast broken up into mountain ridges, marshes, lakes, and innumerable rivers, brooks, and ponds, with a stunted forest, which seems the general character of all the east and south shores.

Although this enterprising traveller was no geologist, he ascertained that granite—for by that term, no doubt, he meant all the compounds resembling granite — prevails everywhere; and that the exceptions that presented themselves were, porphyry, quartz, gneiss, sienite, basalts, mica slate, clay slate, and secondary sandstone.* He met with many

* He saw porphyry, fine sandstone, friable red sandstone, alum shale, rolled agates, sienite, white

indications of iron, found coal, and crossed several ridges of beautiful serpentine about the centre of the line of his travels, near the lake he called Jameson's Lake, and at Jameson's Mountains, and also at Serpentine Lake.

Mr. Cormack describes the eastern half very differently from Mr. Jukes, who, without seeing it beyond the mere precipices of the coast, says, it is hopelessly barren. Mr. Cormack observed, that that half was a low, picturesque country, in its general aspect, traversed by hills and lakes, and the whole diversified with forest of an humble growth. The country towards the west coast he found more rugged and mountainous, with less forest, until within a few miles of the shores of the Gulf of St. Lawrence. He imagined that the mountains were not in ridges, and that each seemed to be isolated, and to have its own particular base. This illusion might easily deceive an inexperienced person, as he was, though actually crossing the ridges in succession. Those who have visited

quartz rock, beautiful serpentine, and mountains of it and of felspar, and iron in abundance, with indications of coal near Stewart's Lake, to the north-east of the Serpentine Mountains, and about eighty miles to the north of the Bay of Despair.

the singular district called the Short Hills, in Western Canada, will easily comprehend this illusion; for there each particular hill is like a great mountain wave suddenly solidified, and, in crossing them, the succession produces just the same effect as the parallel ridges had on Mr. Cormack.

There were large tracts of shallow bog, producing a short, wiry grass, along the route, and the traveller conjectured that these, as in Ireland, had once been well wooded, as he discovered trunks and roots of much larger trees under the surface, than any now growing in the explored parts of Newfoundland.

Spruce, birch, and larch* composed the woods. Pine was seldom met with, and where

* It is to be borne in mind that the larch (pinus pendula), tamarack, or black larch (pinus microcarpa), red tamarack (larix Americana of Michaux), do not thrive on a sandstone bed. As soon as the roots pierce to the sandstone, the tree becomes crooked and stunted. The North American larch is deciduous-leaved, cones roundish, few flowered, scales reflected, bracts elliptical, and is used in shipbuilding for knees; its timber for masts or spars is inferior to the white or black spruce, being heavier, but it is straight-grained, and strong; it burns rapidly, and is therefore in request for steamboats using wood fuel.

seen, was small; nor was the mountain ash so frequent as in other parts of the island.

The shrubs and procumbent plants bearing eatable berries, such as the whortle berry, pigeon, and blue berry, covered the higher unforested lands; and the Indian tea, called wisha-capucoa, was largely associated with it.

This traveller considers the best soil on the south coast to be that which covers the banks of the rivers, and at the ends of the innumerable bays and harbours formed by the Atlantic; and he, at a time, too, when it was nearly high treason in Newfoundland to make such an assertion, says, that both the soil and climate of the country explored by him were "well adapted for grazing, and the cultivation of potatoes and green crops;" but not, as he thinks, for raising grain.

Eight miles up the great Barrisois, (a corruption of Barachois, a boat-river, in the French Newfoundland dialect) near St. George's Bay, Mr. Cormack discovered excellent coal, some salt springs, and a sulphurous spring. He found also red ochre and gypsum* to be abundant in that region.

* Gypsum, it is said, abounds on the Bay of Bull's shore, near St. John's.

As this is a chapter on natural history, and not exclusively geological, we may here observe, that Mr. Cormack saw vast herds of Carriboo deer,* which in winter live in the forests of the interior, and in summer browse on the plains and barren grounds, as all large tracts of unwooded country are called in Newfoundland; the "Barrens" being everywhere amongst the British settlers a recognised term, not denoting sterility, but merely the absence of wood.

Beavers have become scarce, but foxes are still numerous along the rivers and sea coast, which indicates the plenty of game. The Micmacs of the south coast live chiefly on venison and fish, and go up, according to Mr. Cormack, from East Bay River on the south

* I believe the deer of Newfoundland to be undescribed varieties of the American species; but I have seen as yet only one young fawn.

There are two known kinds, the cervus elaphas, or red deer, (very large and excellent venison,) and the cervus Virginianus, or fallow deer, which feed on moss in winter. The former in this island is the one I saw; it looks like the elk more than the red deer, in its heavy head and long legs, but it was too young to judge from, and deer are not common near the coast or neighbourhood of St. John's.

coast, as far as Serpentine Lake, and thence traverse the vast interior, from lake to lake, in canoes made of basket or wicker work, covered with skins, resembling the coracles of the Welsh, and the boats of the ancient Britons. They never hunt a beaver country oftener than once in three years.

Mr. Cormack, moreover, states, that the country might easily be opened in the interior, and across the whole of the island; and in the belt he traversed, so as to admit the passage of cattle and horses during the summer.

I shall not here enter into detail respecting the geology of the country, on the Atlantic shores of Newfoundland, but leave Mr. Jukes to speak for himself, as he is about to publish, on an extended scale, his report to the House of Assembly in 1840-41, by which it will be seen, how very little is yet known about the matter. The only novelties I have seen in the vicinity of the capital are the evident volcanic action amongst the primary sandstones, and conglomerates; the evident appearance of jasperized shells in the sandstone rocks;—the crater ponds on Signal Hill, and all over the adjoining country, with the dislocated and contorted slate rock, forming the dan-

gerous coves and formidable bays in Avalon's eastern shore,—mixed as they are with conglomerated masses, varying in nodules, from the size of a man's head to a pea, the porphyries, and the igneous protusions which have so unceremoniously appeared amongst them. The serpentinous masses of Portugal Cove, and the trachytic evidences everywhere, convince me, that most of the regular formations on the eastern shore are Greywache's, and the associated rocks of a later period than that assigned by Mr. Jukes; and that the confusion which prevents their being accurately observed in a mere coasting voyage, is caused by the same power which has heaped up the traps and trachytes of the St. Lawrence, and the whole region of Canada, and the shores of New Brunswick, Nova Scotia, Cape Breton, and Labrador, into a vast storehouse of everything interesting and valuable to the geologist and to the manufacturer, by exposing throughout that quarter of the world, those substances which yield the means of continuing civilized life.

I will not enlarge any further on this abstruse subject, but reserve it for a separate work, now in course of preparation.

CHAPTER IV.

ANIMAL KINGDOM.

FIRST DIVISION: QUADRUPEDS, WHALES, BIRDS.

ONE remarkable feature of this island,—equally remarkable with the extraordinary salubrity of a climate which is boisterous to the extreme in winter, hot sometimes to an excess in summer, rainy in autumn, in winter, and in early spring, and liable to all sorts of sudden changes, marshy exhalations, and the miasma engendered by thick low forest, and fell, and by the putrid manure from seal and fish refuse,—is the total absence of venemous reptiles, and of toads and frogs, which are so abundant on the neighbouring continent. Whether these creatures exist in the unknown interior, has not yet been examined into; but if they are absent, their place is abundantly supplied by armies, hosts, myriads of venemous winged ones; for mosquitoes and stinging

midges and flies are as rife as in the unsettled swamps and forests of Canada.

The larger and more interesting birds and quadrupeds of America are not, perhaps, here so extensive in proportion as on the continent; but it is said that the entomology of Newfoundland compensates for the paucity of its mammalia and reptiles, as will be shewn hereafter. But so little is known of the interior, that we must confine ourselves a little on these subjects. We shall now proceed to state that amongst the known wild animals—besides the deer and beaver, the otter, the fox in several varieties, martins, and other usual small American fur-bearing animals—there are the great Labrador hare, the bat,* rat, field-mouse and common

* The bat is small, and is probably the vespertilio pruinosus.

The black bear is the ursus Americanus, long-legged variety, with a pointed muzzle, of a terrier's spot colour, and grows very large.

The weasel is the mustela putorius (vulgaris.)

The martin is a weasel, (mustela martes,) affording a fine glossy skin; the mink, also, (m. vison or laterola,) and the fisher is a mustela, inhabiting ponds.

The otter, (lutra Canadensis,) land otter.

The wolf (canis lupus occidentalis) of Richardson, grows very large, is frequently traced near the capital,

mouse, wild cat, seals, weasels, wolves; and some persons assert that the rein-deer are found—which, from the abundance of mosses, is likely.

The morse, sea-horse (trichicus rosmarus) formerly abounded in the straits of Belle-isle, and on other parts of the coasts, but has been

and does much injury to young cattle; a price is put by the legislature on its head.

The fox is the red and the gray, canis (vulpes) fulvus, canis (vulpes) cinereo argentatus.

The beaver (castor fiber) is only found in the interior ponds and marshes, and known scarcely to any of the settlers.

I think I have seen the musquash (fiber zibethicus), whose habits are so like those of the beaver, in the three ponds, near St. John's; its tail, unlike that of the beaver, (which is a trowel,) is like a thick round file. It is called musk-rat, in Canada, from having a musky odour.

Several varieties of rat are destructively common, as might be imagined in a country so resorted to by ships.

The hare is very large, becomes white in winter, is scarce near St. John's, and is a variety of the lepus Americanus. It is falsely termed a rabbit in Canada; it never burrows, and has all the habits of the hare, but its flesh is coarser.

The seals are in great variety, but the most numerous are phoca vitulina (common seal), and phoca cristata, (hooded seal.)

mercilessly destroyed for its blubber and hide, the latter having been eagerly sought after for coach traces and other purposes, in which the best leather was of less value.

The birds of this island are said to be very numerous in the interior; if so, it is very different here than in Canada, at least, as far as forest is concerned, for there the deep woods are not the places in which to seek the feathered tribe.

I have observed no eagles since I have been here but the sea-eagle (falco ossifragus). The fishing hawk of Newfoundland, is said to be plentifully scattered on the coast, and no doubt is migratory, or retreats to the interior. I have not seen the falco leuco-cephalus, or American bald eagle, so common in the United States and in Canada, and which the American republic has adopted in the national shield, although its characters are anything but eagle-like, as it lives by stealing the food of the falco haliætus, or Canada fish-hawk, the osprey, which is a visitor of Newfoundland.

A falco columbarius (pigeon eagle, or hawk) was shot here in December, 1841, and another seen in January 1842.

The hawk tribe appear numerous, particularly falco palumbarius, or the gos-hawk,

and the sparrow-hawk; of the owls, there are amazing numbers and varieties—some very large, particularly the snow-white owl and the light grey owl, and some eared; but I have not seen the strix acadica, or diminutive owl, scarcely larger than a sparrow, and which occasionally visits Canada. I think I saw this year, the red-backed shrike, or butcherbird, (lanius collurio.)

The pie family are no doubt, as is common in woody countries, numerous in the interior; and the raven is, as usual everywhere else in the world, an attendant on the labours of man; but I have not heard the forest resounding with their hammerings, nor are the woodpeckers common near the settlements, but there are two kinds occasionally seen, one the speckled sort. The Newfoundland blackbird is, perhaps, the rose-coloured ouzel (turdus roseus), called a robin here, although as large as a blackbird.

In fact, flights of land birds, as in Canada, are not seen on the eastern coast of Newfoundland. The crow (corvus corone) here, as well as all over America, enlivens the fields as well as the raven, but I have not yet seen that beautiful American member of his family, the

blue jay; but he is here;—at least, a variety has been seen. The night hawk (caprimulgus) is occasionally observed, but he does not treat us with his vociferous cry of "Whip-poor-Will," and is probably the species, c. Virginianus.

I am not very clear about the swallow or the martin, except the sand-martin, (hirundo riparia) which stays about ten weeks in summer, being a frequent visitor on the east coast, but there are several of the family canori, muscicapa, or fly-catcher; icteria, yellow-breasted chatterer; turdus felivox, cat bird; turdus rufus, or ferruginous thrush; turdus migratorius, called a robin in Canada, although ten times as large.

I think the sylvia autumnalis (autumnal warbler) visits my garden; but I have not seen that common American species, the undaunted little saxicola (or blue bird) yet. The little wren is occasionally observed, and the yellow willow wren is very common. The humming bird does not deign to appear, probably from the paucity, at present, of flowering trees and shrubs in the gardens, or from the great belt of water between Newfoundland and the continent.

The little black-cap titmouse (parus arti-

capillus) lives both summer and winter in Newfoundland, and I see it daily seeking its food in some willows in front of my house, and swinging in the wind on the yielding branches.

The snow bird (emberiza, or rather plectrophanes rivalis,) is very common on all bare grounds and about the fields, but is not sought after as in Canada, as a luxury. It somewhat resembles the ortolan, in a pie.

I do not believe that there are any true sparrows in Newfoundland, although there are several fringillas common to North America, such as f. passerina, yellow winged sparrow; Canadensis, tree sparrow; and pusilla, field sparrow. The pinefinch, or grosbeak (coxia enacleater), is common, and the lesser redpole, fringilla linaria.

The dove family do not frequent the woods about the coast, and I am not aware of there being any in the interior.

Of the gallinæ, I know of no other than the ptarmigan, or white winter grouse, which is brown and white in summer, and is very plentiful on the bare highlands, where they are covered by berry-bearing plants. It is a variety of the tetrao lagopus of Pennant, and

is much used for the table, both roasted and in white soups; but they are still dear, the price of a brace being half a dollar, or two shillings and sixpence, currency—of which we shall speak more in a future chapter, when I hope to obtain more information about it. Its summer plumage is a brownish ash grey, mottled and barred with dusky spots; this colour, when the frosts set in, gradually disappears, as in the Alpine hare; and at length, when the snow falls, the bird is pure white. These remarkable changes, effected, as in the northern hare, without loss of substance, fit it admirably for its situation, as the sportsman, if he have not a dog used to the game, may almost walk over the bird without putting it up. I have walked here into a covey in latter autumn, and, in Canada, close up to a white hare, in the snow.

Of grallæ, there are two or three species; of plover, the golden and the grey; but I have not observed the vociferous, or kildeer, so common in Canada, and which has its name from its repeated note; neither have I heard the bittern, although it is common, as I am told, in some parts of the country; but the long-billed curlew (numenius); the whimbrel,

scolopax phœpus; tringa pusilla, tringa hypoleucas, or beach bird; and the purre or oxeye, t. cinclus, and other sand-pipers, are found in favourable localities. The American snipe (scolopax) is very common. The want of beaches and sandy spots on the east coast, the woods margining the lakes, and the marshes being carpeted with plants, probably causes fewer plovers and curlews to be seen in this country, than is usual on rocky shores where there are ocean beaches.

In the order, Anseres, there are many which visit or dwell in Newfoundland, covered as it is with and surrounded by water. The terus, the gulls, the Canada goose, and snow goose, the blue winged teal, shoveller, and great brown duck, the widgeon, and the mallard, frequent the lonely ponds, but are seldom, if ever, seen in the settlements. The eider duck is said to abound on the great lakes and on the north shores. The Newfoundland goose is a remarkably elegant bird, easily domesticated, but does not breed; it is about the size of the common goose, but with a more swan-like form, and has a black ring round its neck. It is a variety of anser Canadensis, vulgarly called bustard, from the French having named

it outarde, but I have not yet seen it figured; its neck is longer than the Brent goose of Berwick, which it much resembles.

The sea-birds are very numerous, from the gull, through the duck tribe, to the goosander, the gannet, the great northern diver or loon, the little auk, the puffin, and the razor-bill;—all these, with many of the land or lake water fowl, are, however, disagreeably fishy. One of the tests of the cook is, never to roast a duck which has a saw bill, or, in other words, whose bill is serrated.

In winter, many of the arctic icebirds frequent the coast, but the large auk or penguin, (alca impennis,) which, not fifty years ago, was a sure sea-mark on the edge of and inside the banks, has totally disappeared, from the ruthless trade in its eggs and skin.*

* In the "English Pilot," for 1794, is given the following account of this now, perhaps, extinct bird in Newfoundland:—"There is also another thing to be taken notice of in treating of this coast, that you may know this by the great quantities of fowls upon the bank—viz., shearwaters, willocks, noddies, gulls, penguins, &c., without making any exceptions; which is a mistake, for I have seen all these fowls a hundred leagues off this bank, the penguins excepted." It is true that all these fowls are seen there in great quan-

But as the reader may wish for more particular information respecting the water-birds

tities, but none are so much to be minded as the penguins, for these never go without the bank, as others do, for they are always on it or within it, several of them together, sometimes more, sometimes less, but never less than two together; they are large fowls, about the bigness of a goose, a coal-black head and back, with a white belly, and a milk-white spot under one of their eyes, which nature has ordered to be under the right eye—an extraordinary mark. For my part, I never saw any with such a spot under their left eye. These birds never fly, for their wings are very short and most like the fins of fish, having nothing upon them but a sort of down and short feathers."

It would be interesting to trace whether any of these curious birds remain in Newfoundland. Cuvier denies that there are any true penguins (apterodytes) excepting in the Antarctic Seas. Perhaps the Newfoundland penguin, which has given its name to so many parts of the coast, is the great auk (alca), the catarrhactas of Brisson, and the gorfus of Cuvier—a name he derived from goir-fugel, which they are called in Feroe. The auks have no thumb, like the South Sea penguins; the penguin's legs are also placed further back than is the case in any other known bird. It is of much interest to natural history to know and trace whether it has been really extirpated, or has only fled to uninhabited regions from its persecutors, like the Red Indian and the walrus.

in Newfoundland, I am able to say that the following are found here:—the little grebe (colymbus minutas); the little auk or icebird (alca alle), which is called the sea dove, from its very strange head, and more bird-like look.

The puffin (alca arctica), which may be called the sea-owl, from its extraordinary head and wise look, and which frequents in myriads the islands about Bonavista Bay.

The guillemot (colymbus troile), or merr of Newfoundland.

The great northern diver or loon, or loo, of Newfoundland (colymbus glacialis). This beautiful, solitary, and large bird is seen on all the Canadian lakes, with his speckled black and white plumage, and his long neck, round which a row of black bands are drawn, and which the Indians dry for ornament. I remember obtaining a dozen of these, and they were made into tippets, and looked very pretty.

The imber goose (colymbus immer), is sometimes met with to the northward of the island.

The black tern (sterna fissipedes) is met with occasionally.

The common tern or sea-swallow (sterna hirundo), is very plentiful.

The wagel or great grey gull (larus nævius), and the common gull, or sea-mew (larus canus,) are very plentiful, as well as many other kinds of gull, including the arctic gull (l. parasiticus), which, it is well known, pursues the smaller gulls to make them drop their prey, whence it has been supposed that he lived upon the excrements which fell from them.

The kittiwake or annett (larus rissa), which is eaten in Shetland, and many other places, as well as the tarrock (l. tridactylus), also frequent Newfoundland. It is of these kinds the Esquimaux, in Labrador, make clothing and caps, as well as use them for food.

The fulmar or mallemoker (procellaria glacialis), frequents the northern shores of Labrador and Newfoundland, as well as the shearwater (p. puffinus), the stormy petrel, or Mother Cary's chickens (p. peligaca), abounds.

Of the mergus tribe, the red-breasted merganser (mergus serrator), and the goosander (m. merganser), are found here.

Amongst the anas tribe, I am not certain about the wild swan, and have already men-

tioned the Newfoundland goose and Canada goose, which are seen with the common wild goose (anas anser), the latter in multitudes in Labrador, in the spring and autumn, until September, with the laughing goose (anas albifrons).

The eider duck (anas mollisima) is common in both Labrador and Newfoundland, as well as the velvet or great black sea-duck (anas-fusca), the scoter (anas nigra), or black diver. The black freshwater duck and the scaup duck (anas marila) frequent the lakes and ponds as well as the sheil-drake (a. tadorna), the widgeon (a. penelope), and the teal (a. crecca).

The pintail duck, which is good to eat, is a very handsome bird; and from its plumage and the shape of its tail, is called the sea pheasant, and is found here, as well as a very similar bird (anas glacialis) the long-tailed duck, whose down is equally rich as that of the eider duck.

That immense sea bird, the lazy cormorant, or cormorant (pelicanus carbo), is also common on the desert rocky places of the coast, particularly about Trepassey and to the north-

ward; and so is another species of pelican, the gannet or solan goose (pelicanus bassanus).

The Baccalao, or as the sailors call it Baccaloo bird, now somewhat answers the same end as the auk, or penguin, which has disappeared. It is rarely seen beyond the banks, which it frequents for the offal thrown out of the fishing vessels, and for the shoals of small fish; they are usually seen floating, and are black and white, being a variety of the mergus family.

These birds principally resort, on shore, to a large and precipitous desert island, at the mouth of Conception Bay, called Baccalao, or Codfish Island, and where they may be seen in uncountable myriads, and where the adventurous egg-hunter suspends himself from the precipices, to gather the eggs and young. This favourite spot, as well as the desolate islets to the northward, called the Funk Islands, and many others similarly situated on the rugged coasts, or in the neighbouring ocean, the terror of mariners, are rendered white by the accumulation of sea-bird's dung; but an act of the legislature has now forbidden the taking of eggs, or the young, on account of the utility of the birds as a sea-mark. The Funk Isle is

so covered by it many feet deep, that it has been suggested, that it may prove a profitable article for the agriculturists now starting into operation in Newfoundland, in the same way as the guano dung on the coasts of the lower pacific, which forms a very valuable article of traffic there.

Of the cetaceæ, or whale family, that extraordinary race, combining the characters of the mammiferous inhabitant of the earth, with those of the denizens of the ocean, without being amphibious, the seas of Newfoundland furnish many diversities.

There is no branch of natural history more interesting, than the study of the cetaceous animals. The blending of a mild and harmless monster of the deep, which furnishes man with oil, and with a singular substance unlike bone, or any other production of animal life, by which the creature lives, and has his being, and which serve him to procure his food in place of teeth, with another species ferocious in the extreme, with a cavernous mouth, edged with formidable teeth; the variety in the size of the different kinds, and yet a shape common to all, with the great attribute of that maternal care evinced by all

animals deriving their first nourishment from the mother's breast;—all these circumstances render the habits and natures of the cetaceous tribe, objects of intense interest; whilst by pursuing this study, we arrive at the conclusion, that a large proportion of this singular creation is yet unknown, and that instead of being confined in their food to the minute and microscopic insects of the sea, the whales are generally devourers of large fish, and are dreaded both from their size and their voracity, by most of the inhabitants of the vast deep in which they roam.

The best modern accounts of the northern whales that I have been able to gather, are those of Scoresby and Dewhurst, and having been in early youth high enough north to see the constant sun for weeks together, and to observe the whale fishers, I have noted down many observations upon this class, both in the northern seas of Europe, America, and the great Gulf of St. Lawrence and Labrador.

The coast and gulf whale fishery is now becoming of much value to Newfoundland, and it will therefore not be uninteresting to state the description of fish which are likely

to engage these coast fishers, as the northern ice fishing is fast failing.

Of these we will commence with the true balænæ, the toothless whales; and first, with b. mysticetus, the great common oil whale of the northern ocean, or great Greenland whale, which occasionally visits these regions; not, however, so frequently as to form an object of chase.

Of this class, the mysticetus lives on medusæ animalculæ, such as actiniæ, sepiæ, cliones canori, helicæ, and occasionally even squillæ (the shrimp), and there are three well-known kinds—the mysticetus, or great whale, bone whale, the icelandica, and the gibbar, or razor-fish, so named from a sharp dorsal fin. They vary in size, from forty-five to seventy feet, and the quantity of oil is proportioned to the length of the baleen, or longest blade of whalebone—one foot giving one gallon and a half, and twelve feet, twenty-one gallons; the mysticetus being the best, and its jaws or head bones affording the purest oil. The inferior jaw-bone sometimes measures twenty-five feet. the animal has a black skin on its back.

The Iceland whale, grey whale, (nordcaper

of Lacepede) is longer than the mysticetus, but has a smaller head, and swims much quicker. It is also voracious, and having a larger gullet, feeds on shad, mackerel, small cod, and herrings. It is immediately known, when seen, by the spiracles ejecting water in radii or streams, and not in a jet, as in other whales. The razor-back is another variety, and, sometimes called finner.

Of the true or toothless whales, seven species have been observed. Lacepede has formed the balænoptera, or finned whales, into a distinct class, and has placed the gibbar, or fin fish of Pennant, first. It is longer and more slender, and of course affords less blubber and oil than the common whale; it blows quicker, is of a bluer tinge, and is at once known by its horny fin on the lower portion of the back. This fish, it has been accurately ascertained, is sometimes a hundred feet in length, and is more fierce than its sluggish fellow of the northern ocean.

The next of this class of finners, is the b. acuto rostra, or sharp-nosed whale, which I saw within a day's sail of St. John's, in 1840, alongside the ship. It is the beaked whale of the fishermen; and about twenty-five feet long; its

whalebone is yellowish, thin, and semi-transparent, and it has pouches, or folds of fat, on its throat and belly.

But the most common of this class in the Newfoundland seas, is balænoptera jubartes, or pike-headed finner, its dorsal fin being two feet and a half high. It lives on capelin, lance-fish, and argonautica arctica, a species of clio or sepia. When it opens its mouth to receive food, the plaits or folds of the belly unfold, and assume in the fore part or throat, an elegantly striped red colour.

The rorqual, b. rorqual of Lacepede, is another variety, being what is usually called the broad-nosed whale; it attains a huge length, its back is blackish and marbled, and belly of a white hue; but as it is very swift, and yields less oil than the other large whales, it is not much known or sought after.

The next order is the predentate, or those with teeth in the anterior part of the jaw, and embraces the monodons or narwhales, the unicorns of our whales, which, instead of uniform teeth, are furnished with a tusk, piercer or sword, and are therefore called sword-fish. They are not very common on these shores, excepting North Labrador, and

are divided into two species, the single-sworded, and double sworded; the former being from thirteen to sixteen feet long, the latter, from twelve to twenty-five. They appear to live on sepiæ or cuttle-fish; some of these creatures are of a separate tribe on the Labrador coast, and have one or two small, crooked teeth in the lower jaw. The Esquimaux find them dead occasionally, and call them arnanak, or the aperient fish; they are very rare, and are valued by those blubber-eaters, for the aperient quality of their flesh and oil.

The subdentate cetacea, have teeth only in the lower jaw, and are remarkable for the size of the head, which frequently occupies nearly one half, or more than a third of the whole animal.

These are the cachalots, and are of various species, such as physeter, macrocephalus, cetadon, trumpo, cylindricus, and microps. They furnish ambergris and spermaceti. The first attains an enormous and almost incredible length, but is usually about sixty feet. It is said, on good authority, that it has reached 144 feet; it feeds on lump-fish, cuttle-fish, the dog fish, and even swallows the small shark. It is sometimes seen on these coasts,

but its usual habitation is higher north, as well as the lesser cetadon, or small spermaceti whale. The seat of the spermaceti is below the nose or snout, and its oil, as is well known, is superior to all other animal oil for the lamp.

The trumpo, or blunt-headed cachalot, is oftener observed in these seas, and is called the New England cachalot; its head is enormous, and nearly divides the body into half, it attains sixty feet in length; the upper jaw is five feet longer than the lower, and round at the nose. The teeth are dispersed, eighteen in number, and fit into cavities of the upper jaw; it has an observable prominence on the back, instead of a dorsal fin, and the pectoral fins are small. It is very ugly, and very bold and swift, opening its huge jaws in fight, like the hippopotamus. Its oil is contained in cells near the brain, and is got at by boring the skull. It is also productive of a very pure and fine oil from the blubber, of which it yields an ample supply.

The physeter cylindricus or round-backed spermaceti whale, has a hunch eighteen inches high on its back, jaws nearly equal, head one-third of carcase, and teeth twenty-five, curved and sharp, in each lower jaw. It is of an uni-

form black colour, and about fifty feet in length by thirty-six in girth. It frequents many portions of the North Atlantic.

The next is microps or the small-eyed spermaceti whale, the black-headed variety, and one of the most dangerous of the whole tribe. Its teeth are long and formidable; they are conical, and set in two-thirds of the length of the lower jaw, and are about forty in number. It is about the size of the preceding, and is remarkable for a high dorsal fin which is acutely pointed. This fierce whale attacks porpoises, and also fights with those of its kind, tearing lumps of blubber from their bodies. Of course it is rarely caught, but its flesh is prized by the Labrador Esquimaux. It yields a great quantity of spermaceti, and very little oil.

Occasionally the physeter malar, or great-finned cachalot, an inhabitant of the North Seas, is seen, and immediately known by its huge back fin, which stands up like the mast of a ship, and by three hunches succeeding this fin on the lower part of the back. Like its congeners, it is fierce and wild, and seldom captured; its teeth are obtuse, and vary from eight inches to six, the longest being in front; it is gregarious.

The p. bidens or two-toothed satin whale, has a remarkable skin, reflecting light strongly, and looking as if it were cut into streaks. It is smaller than the others, and has only two bony lateral teeth, with a sharp muzzle.

A commoner toothed kind in this part of the ocean, of this family, is the hunched cachalot, or p. gibbosa. It resembles the common whale, but is much smaller, and has its back furnished with more tubercles or hunches, hence called the hunchback.

By this account, carefully extracted from the best authorities, and the result of observation, the commonly-received opinions that the whale is a poor, harmless creature, with a throat that would choke with a hazle nut, vanishes like a long-cherished superstition. Three-fourths of the whole family are fierce, vindictive animals, voracious, and capable of swallowing large fish. Any body who has crossed the Atlantic may have seen the terror of porpoises, and all smaller fry, when pursued by these monsters, who rarely shew themselves in the chase above water, and this fully accounts for so few being captured, excepting in the icy seas, where they are, as it were, hemmed in by the ice and the ships. Those

cetaceous animals which afford us oil, are generally of the toothless or milder temperament, whilst the biting species, armed by nature with offensive weapons, are seldom captured, and yield us chiefly spermaceti and spermaceti oil.

It is the former which engage the small and irregular whale fishery of the Newfoundland coast, and that principally on the harbour coasts of the south, and in the gulf. Nothing can be more common in sailing up or down the St. Lawrence, either in the vast region of Labrador, or in the smaller one of Gaspé, than to see whales of all sizes, from the largest finner to the smallest porpoise or dolphin, and the extent to which this fishery is carried on by the citizens of the United States, and by our colonists, is much greater than has been imagined. In my journal off the Bay of the Seven Islands, I find repeated mention of seeing the black and grey whale in 1831; and since that time, I have observed that these are of all the various cetacea common on the coasts of Newfoundland. A gentleman of my office here, has assured me that he has seen the huge-headed spermaceti whale playing like a porpoise, or perhaps pursuing his prey, in

the very mouth of the narrows of St. John's harbour.

In a voyage of two months' duration, from London to St. John's, in the summer of 1840, I kept an Atlantic journal, and find, that on approaching this coast I saw, on the 30th of June, a shoal of porpoises alongside in a heavy sea, and with them seven or eight bottle-nosed whales, almost touching the ship on the lee side; on the 3rd of July, a dolphin in a tumbling sea, with porpoises and a large spermaceti or big-headed whale; on the 6th, in a high sea, an immense shoal of porpoises, with three large birds hovering over them, and small fish jumping up; the porpoises jumped high out of the water; and, again near sunset, another shoal and a large whale. Soon after this we saw a heavy shoal of bonitos jumping out of the sea, and two whales; on the 21st, after having long buffeted against contrary winds, we saw a Baccalao bird, a proof of being near the banks, and many whales; on the 22nd, in latitude 48°, longitude 48° 55′, in a great swell, in cold but fine weather, we observed many birds; and many blunt or bottle-nosed whales of the smaller kinds.

On the 23rd, just before we made Baccalao

Island, at the entrance of Conception Bay, the land which was first discovered, as it is said, by Cabot, we saw a pike-headed whale about twenty-five feet long, which came alongside and played about under-water for some time, evidently in pursuit of prey. He had a brown back, and very white sides and belly, and the fin or dorsal projection was in the centre of his back; his muzzle was very acute, and had two blow-holes; which shews him to have been a true whale, and not of the dolphin kind. His fin or bump was in the middle and not at the caudal end of the back,—thus he was a new species, not analogous to the rostrata.

On the 24th, we made the Bay of Conception, Baccalao being about five miles off, the fog suddenly clearing, most fortunately for us. Here we saw whales innumerable, some very large indeed, and continued to observe them in running down to St. John's, all along the coast. This is mentioned to shew that these valuable fish abound here, as well as to state my belief, that whenever the porpoises, dolphins bonitos, or other fish appear unusually agitated, they are pursued by these cannibals, if I may so term a class of fishes preying on their own species. Frequent observations on

the coast of Labrador, in the Bay of Chaleur, and in the great estuary of the St. Lawrence, convince me of the fact.

The ambidentate cetacea are those which have teeth in both jaws, and form the family of dolphins, porpoises, and grampuses. The dolphins sometimes attain the length of twenty-five feet, and have only a single blow-hole, with a row of conical teeth in both jaws, and a dorsal fin.

The porpoise (delphinus phoceana communis) is remarkable for having its pectoral fins, in their processes, constructed like a human hand. It is well furnished with teeth, but seldom is longer than seven feet, and differs from the dolphin in having a shorter nose or snout. Its skin is tanned after being rasped or shaved. It burrows or roots in sea-weed and sand, like a pig, and lives on small fishes.

The dolphin of the ancients has been already often described, but, as it is interesting, its characteristics are given in a note.* Of the other

* Delphinus didelphis, delphinus antiquorum; corpore longo subtenti, rostro longo, acuto,—the oye de mer, dauphin vulgaire, of Lacepede. Body, nearly oval; length nine or ten feet; head ends in a muzzle like a bird's beak, with a transverse fold of skin

dolphins, the grampus is the largest; they differ little from the porpoise, but have a blunter snout, a little recurvated, and the dorsal fin large and high, with forty teeth in the two jaws. They are twenty or twenty-five feet long, bulky, and ferocious, and eat even their congeners, the dolphin and porpoise.

The sword grampus, or d. gladiator, has a most singular scimitar-shaped high dorsal fin, long, bony, and broad at the base. He grows to thirty feet, and is a fierce and untiring persecutor of the milder whale and of the harmless seal.

There is also a species of dolphin in the

across the upper part of the snout; cylindrical teeth, a little pointed, and one inch and a half above the gum, varying in number according to age, as many as ninety or ninety-six having been counted; mouth, wide; dorsal fin, high, and placed nearer the tail, and curved near extremity backwards; pectoral fins, low and oval-formed; tail, semi-lunar, and has two lobes falling over each other; upper surface, black; chest, white; white ray passes beneath eyes towards pectoral fins. Master Arion must have had an uneasy seat on this fish.

The splendid dolphin of the Atlantic is much the same in shape and size, but blue and green, and indescribably coloured.

northern seas, which has only two teeth in the lower jaw, grows to forty feet in length, with a spear-shaped fin on his back, near the tail: his upper jaw is beaked like a duck's.

The wild dolphin (d. ferus) has twenty teeth in each jaw, but is not very common here. It is known by its head being rounded and nearly on a level with the back, very thick at the crown, and suddenly diminishing to the muzzle, where it ends in a short, round nose. The jaws are equal, and it is usually about fourteen or fifteen feet long.

The tursio is like it, but has a curved dorsal fin, flat beak, and the lower jaw the longest, with twenty-one cylindrical teeth in each. Its dorsal fin is like that of the splendid dolphin, being a regular series of high and spiny processes along the back, rising in an inclined plane, and incurvated near the tail, where another projection rises, and stretches to the caudal fins, which consist of two semi-lunar lobes. He is black above and white below, and is remarkable as floating high when swimming.

Besides these, there is another recent division of the whale family, hyperoodon, or delphinus deductor, being the common species known in the North Atlantic as the calling or

ca-ing whale, or bottle-nose, bottle-head, flounder's-head, beaked whale, and heading whale.

I saw once in Shetland, when a youth, in 1810, one hundred and thirty of these whales killed, in a voe, or small sound in Unst, and there was something remarkable about the event. I was walking on the shore with the son of Mr. Mouat, a large proprietor in that Ultima Thule, before dinner, when we came upon some whalebones, and he told me that about one hundred years before, if I remember correctly, an immense drove of whales had visited that coast, and that seven years previously another smaller drove had come ashore there, and had been captured, the bones being their relics. I observed that I almost wished I had been alive at that time, to have witnessed such a scene as the capture of such an enormous drove must have been in a small narrow bay, almost landlocked. We returned to dinner, and whilst sitting at table with the magnate of Unst, a person came in hastily, to inform the lord of the manor that a drove of ca-ing whales were in the bay, or voe. Not much time was lost; weapons and boats of every kind were in requisition; the whole population poured forth,

and a little smack which was lying there for us, with her guns assisted to drive the unfortunate visitors on shore. A scene of blood and confusion, of uproar and agony ensued: the old whales guarded their young with affectionate solicitude, kept to sea-ward of them, stove a boat, and, after a lengthened struggle, man as usual prevailed. The bay was a sheet of blood; the wild fishermen in ecstasy; and I saw a scene seldom to be witnessed by any one, for a hundred and thirty were slain. The largest measured from twenty-two to twenty-five or thirty feet in length.

This fish is distinguished from the grampus by the shortness of the dorsal fin and snout, length and narrowness of the pectoral fins, form and number of teeth, and in its colour, the whole body being almost black, and the belly only blackish, and the skin of a smooth, shining, oily substance, like oiled silk; head obtuse, upper jaw projecting some inches over the lower, ending in a blunt process. That it is a dolphin, or allied to that species, is shewn by the single blow-hole, or spiracle. It has two-and-twenty conic teeth, a little hooked; and the female has two breasts, or teats, larger

than a cow's; its food is small fish, and it yields good oil; its body is thick, and about twenty feet long.

The next division is delphinapterus, and the species of these seas, d. beluga, or the white whale, which quits the frozen north for tide rivers in cold weather. It lives on cod and flat fish, and varies from eighteen to twenty feet, but is more usually about twelve. This fish is very beautiful at a distance, being dazzlingly white. Its head is small and long, both jaws equal, with nine or ten small blunt teeth in each, unequally placed, the largest in front near the muzzle; the mouth is small. Instead of a dorsal fin, this dolphin has only a longitudinal projection on the back. The pectoral fins are oval, broad, and thick. The spiracle is in the front part of the head, with a lump near it, which causes the water ejected to fall backwards. The eye is small and projecting. This is the white porpoise of Labrador and the St. Lawrence, always found only in particular parts of the river, or gulf.*

Of amphibious creatures, or those frequenting both elements, the seal and the sea horse,

* Vide "The Canadas in 1841."

the otter, the beaver, and the musk-rat, are also included in this division of animated nature. We shall only mention the family of the seals. There are several varieties in the Newfoundland seas:* the common seal (phoca bitulina), the hooded seal (p. cristata); the former, yellowish grey, or brownish with yellow spots, becomes white from age—from three to five feet long. The other, seven or eight feet in length, and dark, with a piece of loose skin on its head, which can be inflated and drawn over the eyes, and is nearly musket-proof; the nostrils are also distensible, so as to give it a formidable look.

These animals are too well known to need a particular description, and the sea horse (trichicus rosmarus) resembles them, excepting in size and in the head, and in having two enormous canine tusks in the upper jaw, pointing downwards, and sometimes two feet long.

* M. de la Pilage sent a specimen of the calocephalus (lagurus) of F. Cuvier from Newfoundland; and the leonine seal, (stemmatopus cristatus,) called the hooded seal, and p. cristata, becomes very large there; but the seal family is not yet well known, even to our naturalists, for Fischer describes this as a separate species, and calls it mitrata.

It has been seen here as big as the largest ox, and twenty feet long, covered with a short yellowish hair. As already observed, it was formerly abundant, but is now nearly, if not quite, extinct in Newfoundland.

The beaver and the musk-rat have been also already noticed; nor should we have mentioned the seal tribe again, but that they are so obvious a link between the land quadruped and the sea mammalia. The seals are piscivorous, as well as the walrus, which, it is said, however, lives chiefly on sea-plants, such as fucus digitatus, and thus constitutes another link in the great chain which connects the herbivorous amphibia with the fish-eating cetaceous family, the intermediate family being the manati, or sea-cow of the tropical regions.*

* I have been very particular about the whales, &c., as it is an extremely interesting subject to the natives of Newfoundland, and the young men here are turning their attention to natural history.

CHAPTER V.

ANIMAL KINGDOM.—SECOND DIVISION: AMPHIBIA, FISHES.

NATURE, in her wonderful adaptations of means to an end, has placed in the cold, desolate, and stormy regions of the north, an inexhaustible supply of riches, vastly superior, in consequence of their effects upon man, to the pearls, diamonds, and precious stones of the Eastern and warm countries of the globe.

By a singular train of geognostic revolutions, the bottom of the ocean in the vicinity of Newfoundland has been formed into a vast series of submarine hills and valleys, the abode of a separate class of animated beings, deriving their subsistence from each other, and affording to the courage and enterprise of man oceanic mines of wealth, exceeding the most sanguine measure of belief.

I have been greatly struck, in the course of

many voyages across these vast banks, at observing the truly wonderful fecundity of the lesser animals upon which, and by which, the voracious and all-devouring cod, an animal as various in his choice of food as omnivorous man, chiefly subsists. The incredible shoals of lance, a small, elongated, silvery, eel-like creature; the interminable armies of migratory herrings; the hosts of capelin, which are met with in their several seasons, cause the seas to boil and glitter in their rapid paths, producing the effects of currents upon the bosom of the tranquil deep. The locusts, in their march of devastation, have darkened the sky as they flew, and rendered the earth invisible over whole countries when they settled to feed; but these are as nothing in numbers to the periodical journeyers of the Newfoundland seas.

Could we see the hills and valleys of the Great Bank, and the neighbourhood of the iron-bound shores of the island on its Atlantic coasts, how vast would appear their population; for they must be, in favourite places, literally covered by the cod dwelling on these downs, and by the cuttle-fish, which, with other mollusca, the cod uses as common food!

It is sufficient, however, merely to get upon

any elevated spot near the city of St. John's, and cast the eye over the stages upon which cod-fish are drying, to convince oneself that nature has rendered that description of the aliment of man a source from whence the millions and myriads of the globe might draw their sole nutriment without even insensibly diminishing the supply.*

In short, the northern fishes, not excluding whales and mammalia of the cetaceous kinds,

* Anspach, who resided in Conception Bay, describes the scene of the capelin schule, or shoal, arriving:—"It is impossible to conceive, much more to describe, the splendid appearance, on a beautiful moonlight night, at this time. Then its vast surface is completely covered with myriads of fishes, of various kinds and sizes, all actively engaged, either in pursuing or avoiding each other: the whales, alternately rising and plunging, throwing into the air spouts of water; the cod-fish, bounding above the waves, and reflecting the light of the moon from their silvery surface; the capelins, hurrying away in immense shoals, to seek a refuge on the shore, where each retiring wave leaves multitudes skipping upon the sand, an easy prey to the women and children, who stand there with barrows and buckets ready to seize upon the precious and plentiful booty, whilst the fishermen, in their skiffs, with nets made for that purpose, are industriously employed in securing a sufficient quantity of this valuable bait for their fishery."

are, as is well known, most plentiful on these coasts. But, excepting the cod, fishermen trouble themselves very little about them; and the market of a city containing nearly twenty thousand people is scarcely supplied with any other sort of sea produce. Nay, such is the disgusting manner in which these fish are laid out for sale, and such little pains are taken in killing and preparing them, that the first sight I noticed on landing, was whole rows of lanky cod laid in the dirty streets on the ground, whilst a dog was carrying away one in his mouth. It gives a fastidious stomach some trouble to reconcile itself to cod-fish after this. The butchers also hang the bleeding skins of the animals they slaughter before their shops. Altogether, in these respects, less care is taken of public propriety in St. John's than probably in any British town in the civilized world.

There should be a regular fish market and stalls; butchers ought not to kill in the city nor at their shops; and, in fact, there must some day or other be a corporation to regulate such matters, for however cheap fish may be there, it would be decent to sell it properly.

The British reader will scarcely credit me when I say, that no fresh fish is to be had in St. John's in winter, and that it comes occa-

sionally frozen, from Halifax, from private friends of the merchants and others; and yet the harbour is almost always open or free from ice. A few trout are sometimes brought in from the Bay of Bulls, or other outports; but the people exist generally on salted meat and salted fish. It is a wonder they remain so free from cutaneous diseases. The rich live much as elsewhere, with respect to fresh meat, and now procure beef and mutton all the year round, which was not the case ten years ago. That they should not have bestirred themselves, to establish a market to procure fresh fish in the long winters, and to increase their comforts by encouraging agriculture, shews plainly what has formerly been the state of society in this capital, whilst labouring under the stigma of Newfoundland being a mere fishing station.

The veil is soon lifted. Except the persons attached to public colonial offices, who had nothing else to look to, the merchants, as soon as they obtained riches enough, left the city, to retire to Britain, and had regarded their stay in it as merely temporary. But a new race has sprung up. The old merchants, men of very great capital, are gone almost altogether, and their agents have become settlers;

whilst the native-born pride themselves upon their birthplace, and much is doing, and much has already been done, to improve not only the tone of society, but the comforts of the poor and the attainment of luxuries by the rich; but still their city wants a corporation, or something analogous to one, to make it what it ought to be.

But to return to the cod-fish again. It is so common, that nobody has thought it worth while to detail its genera or species. The principal fish caught differs a little from the gadus morrhua* of Linnæus, or ash-coloured cod; and I have neither seen nor tasted any fish here at all to be compared to that excellent British variety, —probably, owing to the way in which it is

* Gadus squamis majoribus (Bloch); morrhua (Belon); molva vel morrhus of Rondelet; cablia (Ström); see Arctic fishes of Dewhurst. Many species, all sea-fish, never frequenting rivers, except the barbot, live on crabs, whelks, herrings, and other fish, and are so greedy as to eat their own young; they cast up whatever they do not digest, like birds of prey, but their digestion is very rapid, as a strong bait of haddock has been digested in six hours. Twice, on crossing the banks, I found large stones as big as a goose-egg in the stomach of cod; in fact, nothing comes amiss: they may be called the sea-ostrich.

caught and prepared, or rather unprepared, for sale. It has neither the firmness nor the flakiness of the London fishmongers' article.

The other largely-dispersed kind is the gadus carbonarius, the sey-fish of Norway, or coal-fish,—so called from the black colour it sometimes partially assumes. It is the best for alimentary purposes, and yields elsewhere, which is not attended to here, ichthyocolla, or isinglass; and it is a much more elegantly shaped fish than the common kind, and sometimes weighs twenty or thirty pounds. The best specimens I have seen of this variety were caught in the Bay of Chaleur. The coal-fish is pickled in brine, and exported in barrels, but the common cod is the kind usually salted in bulk. In this town the bank-fish, or those caught on the banks, are supposed to be superior in quality to the shore-fish, or those caught near the coast.*

* Gadus callarius, tommy cod; g. rupestris, rock cod; g. arenosus, shoal cod, are also inhabitants of these seas, as well as the following:—Gadus merluccius, merluccius vulgaris of Cuvier, the hake; gadus brosme, g. vulgaris of Cuvier, the torsk, or tusk; gadus æglefinus, the haddock, which is sometimes brought to market; gadus pollachius, the pollock.

Of the genus scomber, the mackerel is best known here; but although a good deal is caught for exportation, principally in the Gulf of St. Lawrence, scarcely any come to St. John's market. It is curious, that out of twenty-two known kinds only one should frequent the arçtic regions. The horse mackerel (s. plumbeus), common (s. scombrus) and blue mackerel (s. maculatus), (s. vernalis) spring mackerel, (s. grex) chub mackerel, (s. chryseus) yellow mackerel, are found, and are supposed to cross over the Atlantic from the African coast. They abound in the Gulf of St. Lawrence, where the American fishermen principally engross the fishing of them, to our prejudice.

Scomber thynnus, the gigantic mackerel, or tunny-fish, also occasionally visits the coast, one having been caught lately near Portugal Cove, in Conception Bay.

The mullet (mullus barbatus et ruber) are also seen, as I am told, for I have only seen the red kind.

Of the genus salmo, there are many and excellent kinds in the rivers and seas of this island, and the Labrador shore attached to its government. I shall enumerate a few, and

shall begin with the salmo Greenlandicus, or Greenland salmon, the salmo arcticus of Pennant, but which is, I believe, the real Greenland variety, and is here of immense value to the fisheries, as bait. The real salmo arcticus, which inhabits the stony rivers in the Frozen Ocean, is a little fish like a grayling.

This fish, the capelin, rarely exceeds seven inches in length; its colour is a very pale green, with a tinge of brown above the abdomen, and its sides are silvery. Its most remarkable feature consists in the male fish having a rough fascia, beset with minute pyramidic scales, standing upright like a pile of plush above the laterals. When the female seeks the shore, for the purpose of depositing spawn, she is taken between two of these ridged males, and they all violently rush onwards, the compression excluding the ova; two, three, and even as many as ten, have been observed thus glued together by these villous crests. They deposit their eggs amongst the smaller fuci and confervæ, on which they feed, as well as on minute crabs, etc., and are extremely good eating, both fresh and salted, being reckoned a great luxury at home.

Their shape is elongated, contracting rather

suddenly towards the tail; the dorsal fin in the middle of the back, and the fins generally, rather large for the size of the fish; tail forked, and scales minute. In taste it resembles the smelt, and migrates to Newfoundland about the middle of June, when it is so numerous as to cause the week or two after the 20th of that month to be called the "capelin season," the wind being then easterly. The masses are so great, that a boat may be filled in a couple of hours, by two men with a landing-net. It remains on the coast for about six weeks, and, according to Dr. Chappell, does not deposit its spawn, or reach Labrador, before August or September; which must be a mistake, as it would be fatal to the fishery if they came not sooner.

They cover the surface of the ocean for miles, and probably are driven from the arctic seas by their enemies, the whales and other fish; the cod devours them by myriads, and the beaches of Labrador and Newfoundland are covered with their bodies to an incredible extent.

A capelin school, schule, or shoal, is eagerly looked for as the real commencement of the cod fishery.

So delicious is this little salmon reckoned, that a small keg of them well cured is a present for European friends. The best I ever observed were in the Bay of Chaleur, where more pains are taken to preserve them. In Newfoundland they scarcely care about them, and do not think them much worth exporting, as a whole sackful dried may be had for a trifle.

In my note-book I find that the salmo salar, or common salmon, is chiefly caught in these regions in Labrador, whence it is a principal article of the export trade. In Newfoundland, the fisheries are in Gander Bay, White Bay, Exploits and Bonavista Bays, with several on the western part of the south shore, but the island trade is not considerable; and in St. John's, fresh salmon is almost as dear and as scarce as in London, whilst the cured fish used comes from Labrador,—so all-absorbent is the cod fishery, on a coast abounding with such a variety of edible denizens of the ocean.

There are many varieties of this fish here, but little is known respecting their habits. In Labrador they are taken from June to August, in stake nets, placed at the mouths of rivers, in bays and harbours, and are split and salted in

large tubs, with stones put over them to press the pickle in. They are then resalted, and packed in tierces of two hundred pounds each. The salmo trutta, salmon trout, and salmo fario, common trout, with a variety called mud trout, are also plentiful in rivers and ponds; and the little smelt is taken on some parts of the coast, answering to the osmerus eperlanus of Britain.

Of the genus clupea, c. harengis, the common herring is well known, and vast numbers are taken in the Gulf of St. Lawrence, and in all the Newfoundland bays. They migrate from Europe, in the way so often described, and arrive on these coasts about the beginning of May, and continue until the end of June. Their first appearance is hailed with delight on the east coast, about Conception Bay, as they are the first bait used for cod; the next being the lance, or sand-eel; the third, the capelin or best bait; and the last, the cuttle-fish or squid, in the beginning of August.*

* The lance is a long thin fish like a sand-eel, and is of the eel kind; it is the amnodytes tobianus. I have seen on the banks the sea alive with this little creature, pursued by its voracious enemies, and rushing to the side of the ship.

The squid, or cuttle-fish, is the sepia arctica, or Greenlandica; it is taken at the bottom by lines called

Clupea vernalis, the alewife, and c. minima, the brett, are caught in the Gulf.

Of eels there are anguilla muræna, the common eel, and the conger (conger muræna of Cuvier). The former are caught in almost every pond and stream, and the inhabitants place eel-baskets, sunk in the brooks at their outlets into the sea, for their reception. I

jiggers, or double hooks placed back to back, with lead, shaped like a fish, on the shank; and whole fleets of boats may be seen in the beginning of August, fishing for cuttle-fish, which are caught by jerking or jigging the line. They are well known, from their curious property of exuding an inky fluid, and from the use to which its shell is applied in polishing. Hundreds of tons of these mollusca are thrown up where there are beaches by the sea, and produce an intolerable stench by their decomposition; in fact, throughout the island, it takes some time before one's olfactory nerves can endure the various powerful odours arising from rotting seal blubber in the oil vats, from decomposing seals' flesh and cods' heads, and offal, used as manures; and it appears very strange that such a perfect nuisance as that of permitting seal blubber and cod offal to melt into oil in huge cisterns by solar heat can be now endured in a city numbering twenty thousand inhabitants. Surely these processes, disgusting in the extreme, might be carried on in situations away from dwelling houses. The town is unendurable in autumn to strangers; but such is the force of habit, that the

have not seen any of the species so closely resembling eels, petromyzon marinus or fluviatilis, sea or river lamprey, but believe they are to be found.

My notes furnish me, in sea-fish, without attending to regular classification, with some of the pleuronectes, as platessa flessus; the flounder, or dab of St. Lawrence, is so abund-

people, even the gentry, become reconciled to live in an atmosphere of stifling stink. Now an agricultural society is formed, manure of sea-fish bones will be used instead of the exhausting blubber and cods' head manure, which impoverishes the soil after a season, is extremely expensive as well as offensive, and breeds innumerable flies and maggots, which prey upon all vegetable substances. I will only cite one year, 1840. I had to sow many garden culinary seeds four or five times, and even then without success, from a devastating grub, which preyed on the vitals of the land; nay, such was the voracity of insects that there was not a currant-bush, not a flower, not a tree, nor a plant of any kind, which was not unleaved by them. The nuisance of flies in St. John's is as bad as Humboldt's "plaga de las moscas," the plague of flies, in the savannas of the Orinoco. Their fishy odour is worse than their numbers, and they devour everything; they hybernate, too, and every cupboard and crevice of a house are filled by them in winter, to swarm again in spring. The most intense cold has no effect on this seven-sleeping race.

ant in Labrador, that I have been occupied, whilst detained by a fog, in a boat on shore, in spearing them as fast as I could use the weapon. The turbot (p. maximus) is very rare, but the halibut (the hyppoglassus vulgaris of Cuvier) is common enough to embarrass the fishermen, who detest it for the trouble it gives. It attains an enormous size, and when caught by the cod-hook and brought to the surface, requires great power to bring it aboard. Chappell, I think, states that the cruel fishers put a piece of wood across the gills, so as to prevent it from sinking, and then let it go. They call this spritsail-yarding a halibut. This immense fish is coarse, and rarely used, excepting by hungry sailors. The sole, I am convinced, notwithstanding the assertions of American naturalists, is very rarely seen in these seas. The only one I ever observed, after many days' fishing in the Gulf, was a very small one, dead in the belly of a cod. The real plaice, also p. platessa, is either not sought after or is rare, but there is a variety sometimes brought in to St. John's, strongly resembling it, and the mouths of all the harbours abound with the species.

It is said that the rays are also common,

such as the thornback (raia clavata) and the skate (raia batis), but I cannot speak from observation concerning them, nor of the perches, which, however, abound in the gulf rivers. The ponds and streams near inhabited places are chiefly tenanted by trout.

Of the sea fish, I have seen lophius piscatorius, the frog-fish; and squalus caniculus, the dog-fish, dreaded by the people using nets, from the mischief it does. It is remarkable for its singularly placed mouth. The sharks of this tribe abound, and even render the few bathing places there somewhat unpleasant. Of these, squalus zygaena, the hammer head; carcharius maximus, the blue shark; selache maximus, the basking shark; carcharius vulgaris, the great white or common shark; and c. vulpes, the fox or thrasher, are the best observed. The latter is a great enemy to the small whales. I have seen the little fellow persevere in his attacks upon the huge animal, until the whale sprang out of the water, and made the sea foam with the torment or irritation he endured.

The little pipe fish (sygnathus typhle) I have caught upon the banks, as well as exocetus mesogaster, the North Atlantic flying-fish; and echeneis remora, the sucking fish, is frequently

observed. I have also watched with great interest in these latitudes the assiduities of the pilot fish (centronatus ductor) in following a vessel, as well as the little rudder fish, whose generic name and characters I have not been able to trace.

Still, it will require much time and observation to obtain a perfect list of the inhabitants of the deep in these regions, and that too by a naturalist better acquainted with the subject than I am; for in no part of the ocean is there a greater variety, or so much abundance, whilst the creatures feeding in the great interior lakes have yet only been seen by the Indians and fur hunters.

CHAPTER VI.

ANIMAL KINGDOM.—THIRD DIVISION:

INSECTS, MOLLUSCA, CRUSTACEA, ARACHNIDES, ANNULATA, AND ZOOPHYTES.

It would be a most onerous task for the most experienced naturalist to give a catalogue of the animals embraced in this division, which inhabit Newfoundland and its seas,—the interior being unknown, and the coast difficult and dangerous of access, unless very well provided with pilots and means.

The mollusca, or soft animals, are very numerous in the waters of the neighbouring ocean, and the most varied family appears to be that of the cephalopoda, of which the sepia or cuttle-fish is used as bait by the fishermen, as has been already noticed in the last chapter.

The little argonauta, or Portuguese man-of-war, belongs to this class, and is frequently seen sailing about in his tiny boat, with his purple

sail hoisted, and rowing with his tentacula or feelers. Whole fleets, indeed, of this ship-like fish are sometimes observed near the banks in calm weather. If the sea becomes very rough, or they are approached, the sailor within the shell draws in all his six oars or arms, concentrates himself in his vessel, and descends. Nothing can afford a more interesting sight during the Atlantic voyage, than to see these singular creatures careering on the tops of the tiny waves, and even sometimes venturing, when the seas are rising, to sport their little barks upon them.

The cephalopoda use their arms for walking along the bottom, for seizing their prey, for swimming, and for adhering to other bodies.

Next come the pteropoda, swimming mollusca without feet, but which move by means of fin-like processes, placed on each side of the mouth. They consequently do not adhere to other bodies, neither can they crawl along the bottom. Of these, clio borealis is best known. It rarely exceeds an inch in length, and is a little oblong creature, of a membraneous structure, with a head composed of two rounded lobes, from which the tentacula or swimming organs issue. It exists in sufficient numbers

to afford food for the toothless whales, with clio heliocina, whose body ends in a spirally convoluted tail, and is lodged in a very thin shell, which is used as a boat by the animal. The whale is said to prefer this sort of sea-snail.

Of the family gasteropoda, snail and slug kinds, there are several, both in the seas and ponds, and in the earth of Newfoundland, some with and others without defensive shells, or with only the rudiments of them.

This is a very large family, and embraces many curious and interesting shells; but such is the present paucity of information about the interior, the want of beaches on the iron-bound shores, and the absence of a collection here, that I am unable to give a catalogue even with the slightest pretension to accuracy, but may cite planorbis, lymnæa, physa, turbo, paludina, crepidula, helix, buccinum, patella, and chiton.

Of the acephala or headless mollusca, provided with a testaceous mantle, all the bivalves, and some of the multivalves, are members of the race, the most important of which is the oyster; and in consequence of the want of beaches, this is either totally wanting in Newfoundland, or exists only on the western coasts; picton, anomia, arca, mytilus edulis, the edible

muscles, abound in the harbours and rocky shores; also anodonta, unio, cardita, cardium, cyclas, tellina, lucina, venas, mya, teredo, (the ship worm, which is very destructive to the wharfs in the harbour,) pholas, the excavator, and solen, the razor-fish, which buries itself in the sand, and of which I observed a plentiful supply on the sandy beaches on the Labrador coast; hiatella, patella, and crepidula.

Of the cirrhopoda or filamented mollusca, whose abdominal filaments answer as feet or fins, by which they affix themselves to foreign bodies,—the anatifa are well known as adhering to bottoms of ships, to rocks, piles, or, in short, to any substances exposed to the sea, as also does the balanus, of which there are many varieties in these seas. These are both called by sailors barnacles, and they firmly believe that they turn into barnacle geese.

Of the animalia articulata of Cuvier, there are serpula spirorbis on the seaweed, serpula vermicularis, and s. contortuplicata in abundance, covering every inanimate thing in the sea, as well as some shell-fish; terebella, that curious animal which forms a tubular house of grains of sand and minute pieces of broken sea-shells.

I picked up on the Labrador coast some most

singular domiciles of creatures of this class, formed exactly like a depressed lamp globe with an overhanging broad lip, entirely of grains of micaceous sand, which adhered firmly enough to enable me to remove them on board ship, but their fragile nature prevented eventual preservation.

The earth-worm, lumbricus terrestris, appears, like the crow, to inhabit all climates; it is plentiful, even in the barren soil near St. John's, and there are several species. I do not know whether the leech, hirudo, inhabits the ponds, and creeks, and stagnant waters here, but I think that the medicinal kind certainly will not be found.

Of the crustacea, or calcareous shelled articulated animals, Newfoundland produces crabs,* but none very large on the coasts near St. John's, being generally minute and not edible. Lobsters (astacus marinus) are innumerable wherever the shore affords them a resting-place,

* Cancer granulatus, sand crab, is common to all these seas, and the pelagicus, or Gulf-stream weed-crab, is a minute species seen here occasionally. The cancer Arcticus, and c. pusillus, or North Sea crab; c. ampulla, or bottle crab; c. nugax, c. pulex, and c. medusarum, are also observed, all minute animals.

and so little sought after that they are scarcely thought of sufficient importance to bring to market. The fishermen's wives from Portugal Cove and Broad Cove sometimes carry a sackful to the city when they are in season, and sell them from a penny to four or five pence a-piece, according to the size, but owing to want of precaution in catching them they are generally watery and soft. The largest lobster I ever saw in any part of the world is found here, and they are equally plentiful in Chaleur Bay, Gaspe Bay, and along the Labrador shore, so much so that the capture is effected by boys simply thrusting a pointed stick into the holes in the rocks or under stones. I do not think good shrimps are found, although astacus (crangon) and palæmon, the common shrimp, and the prawn, or varieties of them, are plentiful. Squillæ, and gammarus are scarcely separated from these by some modern writers, and still less from the cancer tribe. The whale feeds greatly on them, and his stomach is often found full of gammarus mysticetus, the whale shrimp.

Of the oniscus or wood-louse and whale-louse, there are different species, both of the terrene and marine kinds, here, and the lobster has

also a parasite which is very troublesome to him, nicothoe astaci; indeed almost all the fishes are similarly troubled, particularly the salmon, with animals peculiar to themselves; of these the cod is sometimes dreadfully infested with lernæ bronchiatis, a worm two inches long, and others are troubled with intestinal enemies, in the various forms of ascarides, echino rhineus, tænia, and sipunculus lendix.

I shall not attempt to enumerate the families of arachnides found in this island, as I am am wholly unacquainted with their varieties. They are, however, extremely numerous; otherwise we should be devoured by the flies, which are, even by their aid, kept under with difficulty in houses near the fishing establishments.

For a similar reason the attempt to catalogue or describe the entomological division INSECTA, as found in this island, would prove a failure; and I have to observe that this omission will be of the less moment, as a gentleman quite competent to the task has been residing here for nearly two years, whose profession is that of a naturalist, and who has been sent by the Swedish government for the purpose of collecting materials in this island, and the

neighbourhood, to form a work upon zoology, and all the subjects connected with natural history. I understand the entomology of Newfoundland is very rich in new kinds.

I shall therefore merely remark that I have observed only some different species of coccinelliadæ, ladybirds; some of the locustiadæ, or diurnal grasshoppers; an immense variety of those destructive microscopic insects the aphidiæ, which, in the summer of 1840, attacked every green thing that had a branch, and so thickly covered the stems and leaves of the vegetable marrow plant as to destroy its vitality.

The cocciadæ were not less numerous, and really devoured the shrubs and currant bushes, preferring the red kind to the black, and covering and destroying all the rose bushes.

Of the neuroptera, I have seen some fine specimens of libelluladæ or dragon-flies about the streams. In hymenoptera, there are a few formiciadæ or ants, but not nearly so numerous as in Canada, nor so large nor courageous.

Wasps are more plentiful, and build their pear-shaped nests of a substance resembling whited brown paper, as large as a man's head, in the trees. The solitary and social bees,

andreniadæ and apidæ, are very numerous also; of the latter, are xylocarpa victirna, the wood-cutter; the leaf-cutter, megalichile latimana; and bombus Americanus, the large humble bee.

In lepidoptera, are a great variety of butterflies and moths, though I have not seen any that equal, either in splendour or size, those of Upper Canada; but here I cannot pass over a singular diurnal moth, which partakes of the characters of a butterfly, of a moth, and of a humming-bird. It is of the sphinx species, has the incessant quivering motion of the humming bird, flies from flower to flower in the same way, inserts its honey-gatherer, in the same manner as the humming-bird does its beak, into the flower, and altogether looks so like that tiny bird, that at first I thought it was a habitant of Newfoundland.

Its general colour is a rufous brown, and it has the faculty of defending itself against its enemies, by raising the fan-like tail, and ejecting, with some force, in a straight line, a volume of liquid. They are not very common, and I chiefly observed them about the lilac flowers in the early summer, and afterwards about the white rockets.

The caterpillars in Bombyciadæ and Arctiadæ are very numerous and destructive, particularly arctia actector, the autumnal web; as well as in noctuadæ, those pests to a garden, the n. primordens, or cut-worm, and, in geometradæ, the canker-worm.

In fact, such is the abundance of caterpillars, or insects under that form, that gardens are sometimes planted thrice, and even more, before the plants can be grown; and the turnip, fly and cabbage-fly cause constant trouble and failure in the crops.

The dipterous insects are also great nuisances here, from the mosquitoes (culicidæ) down to the gnat, and from the horse-fly through a legion of species generated by putrid fish and seal's offal.*

This imperfect sketch must be concluded

* On the poplar trees, Lombardy poplar, in my garden, last year, was an insect of a very peculiar kind, black, about as large as a small ladybird, without wings, and with a long body and small head. I neglected to gather it until too late, as I was watching its transformation; but, on seeking it, it was shrivelled; when touched, it instantly struck many milk-white dots all over its back, and then smelt so intolerably of creosote as to render it very offensive; perhaps it is the larva of a species of chrysonela populi.

with such of the radiated animals, as have been observed here.

Of these asterias spinasus, the sea-star; echinus granulatus, the sea-egg, hedgehog, or urchin; scutella pentaphora and trifaria, the shield-shell, I have picked up several, either here, or on the Labrador shore.

In the acalepha class, the sea-nettle (medusa), or sea-blubber, is also common, and of the polypi, actinia, madrepora, and spongia, are in existence; the latter was found, however, in the bay of Chaleur.*

* Mr. Anspach, in his work on Newfoundland, mentions the sea anemone, that beautiful plant like a zoophyte, which he found in the Bay of Bulls. It resembled a collection of long leaves issuing from the surface of a small rock near the shore, which is always under water; they were of a bright straw colour, with streaks and spots of green regularly and irregularly distributed. If touched with anything, they immediately contracted towards a centre and closed, so as to resemble a closed flower of the shape of a truncated cone. This was exhibited amidst a bed of the water-bottle sea-weed. Attempts were made to secure the prize—always, however, fruitlessly; the rock was laid bare, drilled with holes by a sharp iron borer, and every means taken to discover the retreat of the zoophyte. In a few days after these operations, the animal plant again flowered, moved its leaves, both separately or in portions at will, and exhibited all its vigour and beauty.

In hauling cod on the great bank, I twice found an acalephous animal in the stomach of a fish of the order (Cuvier) hydrostatica, and resembling the physalia of Lamartine; it was a pinkish bladder, of the size and form of a large egg, with a purselike apparent mouth or aperture near the summit, and nearly transparent, with a sort of sinus visible in its interior; to its inferior extremity it had a long flexible tube, something resembling the windpipe of a quadruped, which was garnished with filaments, exactly of the form of threaded sea-weed. This process was attached firmly to a rough shell, of large size, but unlike any other I have seen, and very unshapely, being a mass of calcareous roughened matter externally. The shell adhered to a piece of granitous rock. It was impossible to preserve the specimens, as the weather was hot, and their odour rendered it necessary to throw them overboard as quickly as possible. This stench came, I believe, from the inhabitant of the shell, which died, and was so firmly adherent to the piece of rock as not to be detached without destroying the whole.

In conclusion, it is strongly to be urged on the newly-formed agricultural society of New-

foundland, that pains should be taken and premiums offered for descriptions of the caterpillar or great grub, which infests the garden, potato and oat field, as to its being an apterous or coleopterous insect, and as to its habits; and for particulars of that species of leaping insect which destroys the turnip, cabbage, and other plants to such an extent, as sometimes to render several sowings or plantings necessary. It is one of the coleoptera, of nearly the same appearance as the altica nemorum of Illiger. It is very active and very minute, and appears like a black flea.

An accurate history of those insects which prefer the esculent vegetables in this climate, would be of the utmost utility to the farmer and horticulturist, as it would enable them to devise antidotes to their ravages. I believe that the putrid animal matter, so largely used as manure in Newfoundland, and which fills the air in spring with such disgusting effluvia, is chiefly the cause of the amazing abundance of caterpillars and destructive grubs, whose nature confines them to the ground in which they live. The grub just mentioned is a nocturnal feeder, but may always be discovered by opening the ground gently, round

the plant attacked, in the morning. Buckets full of them in a large garden may be thus gathered. It prefers the white kidney bean to the dark, the red, or the spotted kind. It devours it entirely when young, as well as mustard or cress, lettuce, onion seed, radishes, etc., and destroys the broad or Windsor bean by cutting its stalk near the ground. It does not touch the pea much, but luxuriates on the tender potato plant, the vegetable marrow, pumpkin, and young cabbage plant, of all which it speedily leaves no vestiges.

The turnip fly attacks also the parsnip and carrot, and the full-grown cabbage.

CHAPTER VII.

VEGETABLE KINGDOM.

PLANTS.

THE botany of this island and of Labrador is as imperfectly known as the zoology, and as it is, indeed, almost unexplored, the chapter upon the plants of Newfoundland must necessarily be short, and left to future experience to enlarge upon; the object being, at present, more to draw attention to the natural history of a region less known than any other portion of the British empire, than to affect to be very wise upon a variety of subjects.

The distinctive scientific names, as far as possible, have been given to most of the subjects in natural history throughout this section, less with any view of pretending to deep acquaintance with so many and such various branches of knowledge, than to clear the path and to act as pioneer to the future historian

in this untrodden wilderness; and for the same reasons not much attention has been paid to consecutive classification, as the matters have been dealt with as they occurred at the moment, to shew the capabilities of this new region.

Newfoundland differs in no great degree, however, excepting so far as its insularity would warrant us to expect, from the neighbouring continent, in the development of its vegetable kingdom. The trees on the eastern and southern coasts are smaller than those of the adjacent mainland, but reach a considerable size on the westward, north-east, and in the interior, and the soil and climate produce with the same profusion and rapidity many of the berry-bearing shrubs.

That trees are thickly sown and attain a respectable size, notwithstanding all assertion to the contrary, is evinced by the fact that the fine class of brigs navigating between the mother country and the island, are, in most instances, built in the province, from timber produced in it ; the tacmahac or larch being chiefly used, and the only foreign stuff required being planking, which is obtained at a cheaper rate from the continent than can be procured here.

Without following any definite arrangement, it will now be our business to examine the forest, and observe what trees are produced there in sufficient abundance for economic purposes.

Of the coniferæ family, the most prominent members are the spruces,* of which pinus balsamea, the Canada balsam spruce, is one of the principal, which reaches, here, in many places, the usual height of its species, or about thirty feet. It is easily recognised in the woods by its spire-like form, and the feathery nature of its foliage. It is not, however, of much use as a timber. Its balsam is a gum exuding from the bark, and is a vulnerary as well as a varnish. The varnish, when applied on deep water-colour drawings, gives them the appearance of oil paintings.

The pinus nigra or black spruce, is also not a very large tree, neither in Canada nor in this

* The white spruce was seen by Franklin in 68° 53′ N.L., seven feet in circumference at four feet from the ground; this tree, the larch, the poplar birch, and willow, appear to brave the rigours of winter in high latitudes better than any other plants. Currant bushes in full vigour were seen near the mouth of the M'Kenzie in 69° N.L.

country, but attains a considerable size on the west coast, about St. George's Pond and the Bay of Islands. It is used here for fences, posts,* and other small work, as well as in ship building in parts not exposed. From its boughs or sprays, essence of spruce, in Canada, and spruce beer, the common beverage here, are made. The process is very simple, consisting of nothing more than boiling the sprays and smaller branches, adding molasses and yeast, and letting the whole ferment for a day or two.

When bottled and kept, this liquor forms a very pleasant summer drink, but the European palate requires to be accustomed to it. There can be no doubt that it is highly salutary to persons living so much on salt fish as the

* Fences here are made in two modes: one, by placing pickets, or small sticks, close alongside of each other, with the ends in the ground, and then nailing a riband over the whole, at about two feet, or so, from the top; these fences are called, in "the vernacular," picket-fences; they do not last long, as the pine rots near the ground. The other mode is to set up a strong stick every eight or ten feet, and then to nail three or four longer ones of less diameter to them; this is called a longer fence, and the poles of spruce are called "longers."

farmers and fishermen here do, and no respectable farm-house should ever be without it, the only expense being that of the molasses and the time required to make the beverage. About ten gallons of good spruce beer may be manufactured for half a dollar, or a little more than two shillings.

The pinus alba or white spruce, is very abundant, and grows to a good size on the western coast, and even on the south-east, in the interior, from nine to eleven miles from the sea, for wherever settlement has taken effect along the eastern and southern shores, trees have vanished very speedily; a respectable sized log is not now to be had nearer than nine miles from St. John's. This gives the country a very naked aspect; and one writer on it says, the first impression on seeing the district round the capital is, that it has been mowed with a giant's scythe. Fires in the woods in dry summers are also very frequent, owing to the carelessness of the settlers and wood cutters, and devastate whole regions covered by trees, producing so inflammable a material as those of the pine tribe do.

Nothing can exceed the grandeur of these

fires; we saw them on approaching Conception Bay, and after landing a magnificent scene was developed, by two of these fires having occurred a few miles from St. John's. The columns of dense smoke, of a sickly yellow hue in places, and again nearly black, filled the air; and the season being the latter summer, when the sun was very powerful, the appearance of the city and harbour of St. John's, from Signal Hill, elevated five hundred feet above, was very picturesque,—the trailing column of smoke hanging over it, on its slow progress westward to the ocean, as though it was a vast pall, whilst the sun, round as the shield of Norval, peered with a bloody and threatening hue through the curtain of vapour, shorn of all its beams.

This species of fir or spruce is largely employed in Newfoundland in shingles or wooden slates (if we may use the term) for covering roofs, for staves for fish and oil barrels, and for many of the builder's uses. About St. John's, however, it does not furnish wide planking, and is there employed for narrow flooring boards, and weather or clap boarding. When used in making oil barrels, the bung-

hole stave is usually formed of oak, and many fish barrels are constructed by cutting down flour casks into what are then termed drums.

The white spruce roots, in their tough, slender fibres, are used to sew the bark of the canoe of the *voyageur*.

The consumption of all the spruce tribe in the formation of fishing stages, or places to dry the fish on, is enormous; as, in consequence of nature having denied this iron-bound shore the necessary beaches, man has been obliged to substitute stages or platforms, which are very ingeniously formed along the steep descents of the hills on the edges of harbours, by using upright stakes of great length, and attaching others from the hill side to them, and then covering the platform thus formed in ribs longitudinally with the boughs and branches of the pines. To a stranger, and especially a female, the task of walking over these impending stages, often the only path, appears a very nervous one, as the boughs are not placed close, nor wattled in, but left separated as much as possible, to admit the passage of air to the underside of the drying fish. Yet habit has rendered the employed as active on these frail

floors as if they were upon the closest boarded decks.

I think the dwarf, pinus rupestris, or Banksiana gray pine, is found, but not in quantity, at least on the east coast.*

Of the pitch pine, red and white pine, I cannot say much, but that the pinus rubra, or Newfoundland red pine, is indigenous, grows commonly thirty feet high, and they all exist on the west and north east coasts. Though not growing, perhaps, to that gigantic size which they attain in Canada, yet very large trees have been brought to St. John's by the navy in former times, and are still found in great plenty by the ship builders. In fact, it is supposed that fully one half of the twenty species of American pines grow in Newfoundland.

* Pinus Banksiana, or Labrador scrub, or gray pine, sometimes grows only eight feet high in rocky exposed places, and perfectly mats the soil; it, however, attains a good size in favourable localities, but Lambert says its knottiness renders it unfit for masts. It is called cypress, and used for canoe timbers by the Canadian voyageurs. The porcupine feeds on its bark, and it grows even in the high latitudes of M'Kenzie's river." —*Richardson's Appendix to Franklin's Narrative.*

Pinus penidula, the black larch, pinus microcarpa, the red larch, both called tacmahac or tamarac, the larix Americana of Michaux, are the most useful of the island forest trees. The timber of the black larch is very solid, strong, and lasting; and I am told, by very competent and credible persons, that spars fit to mast a large merchantman exist in plenty on the coast about the Bay of Islands. It is, however, very heavy, and therefore whenever the spruce is found of equal size, it is preferred for the masts and yards of the brigs and schooners built in Newfoundland.

There is a very fine brig building now at St. John's, principally from the timber produced in the island; and the knees, or bent pieces, are formed by the great roots and stems, being very strong and durable. Everything but the planking of this vessel, is the growth of Newfoundland, and the plank is only used of foreign growth, because there are no saw mills, nor great demand here for that form of material; thus rendering continental boards and planks cheaper, and more easily obtained.

This wood is always called juniper by the shipwrights here, but has no affinity, as already observed, with the true juniper, which in its

tree state, is the red cedar of America, (juniperus Virginiana) abundant in Upper Canada, and well known for its nearly indestructible and odorous wood.

We have mentioned the shrub junipers and their uses. They are very abundant in Newfoundland.

The iron or lever-wood (ostrya Virginica) exists on stony lands. It is known by its hop-like flower, or fruit; and there are some of the carytus tribe, resembling the American hazle, with elm-like leaves.

I have not seen any oak, or any of the quercus family. The beech is also rare, as well as the elm; but I am told that a species of maple grows near the Bay of Bulls, though I cannot say that in any of my forest rambles I have yet seen any of the acers.

The pyrus Americana, or American mountain ash, is very common in some situations, and grows to about fifteen or twenty feet high. Its well-known scarlet berries are greedily devoured by the birds, the buds and bark have the taste of bitter almonds from the acid contained, and which it is stated renders them fit for making noyeau.

The birches, betula excelsa, b. glandulosa,

b. lenta, b. populifolia, and b. rubra,—the yellow, shrubby, black, white, and red birch—are all found, and some kinds are very common; but I have not traced b. papyracea, or the true large, canoe bark, birch of Canada, which must, however, exist, as the Red Indian had it for his canoe, and used its inner bark, as well as that of the spruce, for bread.

The balsam poplar (populus balsamiferus), the trembling, or ashen-leaf, (p. tremuloides,) are inhabitants of the Newfoundland forest, and p. dilatata, the Lombardy poplar, flourishes pretty well in the gardens.

The salix, or willow family,* as might be supposed in a country abounding in streams and moisture, thrive well, and attain a large size.

Dog-wood (cornus Canadensis), also attains some size for a bush, and is very plentiful.

* The willow near the Arctic circle only grows a few inches high, but there Dr. Richardson found a hundred and seventy species of phænogamous, or flowering plants; the grasses, peats, and rushes, sprang up everywhere, and the cruciferous, or cress tribes, were very numerous; the shrubs were also juniper, two species of willow, dwarf birch, common alder, hippophæ, a gooseberry, the red bearberry, Labrador tea plant, the Lapland rose (rhododendron kapporicum) whortle berry, crowberry, oxyria, orsoval, &c.

I have not yet seen the myrtus cerifera, or candleberry wax myrtle, which is so abundant in the St. Lawrence within the influence of the sea air, and yields an inflammable substance closely resembling wax, but have been informed that it does grow in Newfoundland. The myrica gale, or Dutch myrtle, commonly called in Canada sweet gale, from its fragrance, is one variety.

The Canadian yew (taxus Canadensis), a recumbent shrub, sometimes of a considerable size and spread, is mixed here with the recumbent juniper, which it much resembles, and bears white or dark berries according to its varieties.

I cannot say whether the hop (humulus lupulus) is a native of the country, but it is very common near all gardens, and thrives extremely well.

The shepherdia Canadensis, a spreading shrub, so common on the coasts of the St. Lawrence, is also found here. It bears a red berry, sheds its leaves, which are ovate, acute, light green with brown spots, and silvery hairs on the under surface.

The rose, of which three species, according to "Hooker's Flora," are natives, is very

beautiful in this country, from the profusion in which it grows. The small, shrubby, Hudson's Bay variety (rosa blanda), with its slender, purple-red branches, covers the vicinity of streams. The rosa parviflora, or little rose, with its armed yellow branches, resembles the dog-rose of England, and enamels the open places in summer. The moss, and other varieties of cultivated roses, such as the damask, maiden's blush, and Provence rose, thrive very well in the gardens. The sweet brier, so common in Upper Canada, only grows as an introduced plant.

The moose-wood, or heather-wood shrub, (dirca palustris,) produces yellow flowers and a small yellow berry; it is so flexible, and its bark so strong, that it serves infinitely better than withes for tying packages, or for other purposes, where rope is not to be had.

Of the evergreens there are many kinds in Newfoundland and Labrador, the most celebrated being the Labrador tea plant (ledum latifolium), which sometimes grows three feet high. Its leaves are oblong, replicate on the margin, of a brownish green above, and iron-rust colour beneath, five stamens equal in length to the corolla. Its habitation is in

swamps, with which the country abounds, and it is used by the Indians and hunters chiefly. There is also another variety (ledum palustre), distinguished by having ten stamens longer than the corolla, and by being of humbler growth. Its leaves are rather narrower than the former, and, instead of being folded back on the edges, they are doubled or rolled over. It is very common in marshy places.* The ground laurel (epigæa repens) is also a low running shrub, with leaves nearly two inches in length on long stalks, rough, leathery, and of an ovate form, and shining. Its white, fragrant flowers grow at the ends of the branches.

* Cassini, who visited the island of St. Pierre. in 1768, on a scientific mission concerning the longitude, says that the tea plant resembles the French rosemary, and was the most common plant on that island; they had another they called "annise," and used both as infusions in boiling water; Cassini liked the "annise" the best of the two. Chinese tea is so cheap now that very few, excepting the Indians and old settlers, use the Labrador tea, which is a poor substitute. It is boiled over night, and being thus well steeped, is used warm next morning, and is said to be very wholesome and pleasant by those who like it or are obliged to use it. The ledum palustre was found universally spread near the Arctic circle by Richardson, and supported the party for some time with tripe de roche, or rock tripe.

It thrives best in rocky, dry situations amongst the lofty hills.

The kalmia family is very plentifully dispersed, particularly k. angustifolia, or the narrow-leaved, and k. glauca, or glaucous kalmia, both beautiful evergreens, nearly two feet high, the latter being usually the least. It loves swampy ground. The beautiful clusters of red flowers on the former, and the paler rose-coloured ones in the latter, strike the eye of the observer, in his country walks, almost everywhere.

The rhodora, with its crimson crowns, and the andromeda, are occasionally seen in the same localities.

There is an immense variety of recumbent and trailing evergreens. The black crowberry (empetrum nigrum), with its matted and intertwisted branches, with a fruit like elderberries, grows near the sea. Amongst this class of winter greens, the oxycoccus family are numerous. O. macrocarpus, or cranberry, a trailing evergreen; o. palustris, the small cranberry, also a trailer, both love swamps amidst the mosses. Some of the dryas tribe have also been seen.

The berry-bearing shrubs form one of the fea-

tures of the country; they clothe every swamp and every open rocky tract. They, in fact, carpet the soil in desert places. Of these, the whortleberry family (vaccinium), have many kinds:—v. resinorum, black whortleberry; v. corymbosum, tall whortleberry; v. uliginosum, the blea, or blue berry; the hurtleberry, or, as they are all called, the hurt, prefer swampy places. The v. Pennsylvanicum, or black-blue whortleberry, affects drier ground and rocky situations.

The cowberry (v. vitis idæa) is a small, creeping evergreen, with a red fruit, pleasant to the sight, but not so good to eat as the above.

The partridge berry (gualtheria procumbens) is also abundant. Indeed, the wild and desert solitudes of these regions are amply supplied with the food of birds and of the berry-eating animals; and this amazing fecundity is turned to some account by man, as the berries are now an article of export, both from Labrador and Newfoundland. But the epigæa repens, May-flower, or trailing arbutus, is one of the most beautiful flowering plants of the country.

Equally with the continental provinces, the

forests of Newfoundland produce, spontaneously, the raspberry (rubus strigosus) and strawberry, and a small kind of prickly gooseberry. The currant grows well in the gardens, particularly the black kind.

The Kentish cherry thrives with care at St. John's. I have seen one garden in which the trees were sheltered by adjacent fences, where they attained a very large size, and produced an abundant crop. As a wall-fruit, the cherry does not do so well, probably from the intense heat of summer, and the counteracting winter frosts. Of the wild kinds of trees called cherries, the prunus serotina, or choke cherry, is the most abundant, and attains some height in favourable situations. It forms a very ornamental tree in gardens. The bunches of minute yellowish-white fragrant flowers are followed by long pendulous grape-like fruit, placed on a stalk in a manner resembling currants, first of a dark red, and when ripe of a black colour, pleasant, but astringent to the taste, and devoured greedily by the birds. The stone is about half as large as that of an English cherry, and with the fruit contains so much Prussic acid as to give a high flavour to spirits,

and to make the best cherry brandy. The bark also contains much of the acid, is very smooth, and of a slaty brown colour. It is occasionally used as a vulnerary in Canada, where the tree is very common also. I have several in my garden, but the people here have a prejudice against the fruit.

The prunus Pennsylvanica, or small red cherry, is found, but I have not seen actually indigenous specimens; the only one I know of being in my garden. The fruit is very acid. The bark yields a fine reddish gum in great plenty.

The prunus depressa is a very low shrub, with a small black uneatable fruit.

The wild plum, prunus Americana, is a denizen of the woods, but, as far as I can learn, not very common. The plum, damson, and pear do not thrive well in the gardens, probably from the want of due care and cultivation; neither does the apple, although there are occasionally some of the green and brown varieties seen in St. John's.

The pyrus melanocarpa, or black pyrus, is a small shrub with dark green shining leaves, and white flowers tinged with red, and pro-

ducing a very sharp astringent little black fruit.*

The thorn or hawthorn is also found, and hedges of the English whitethorn or May have been introduced, and would thrive extremely well if it were not for the great difficulty attendant upon their protection from cattle and goats. In winter these fences are exposed also to plunder, as no wood grows near the city, and the really heavy cost of fencing appears so lightly valued, that no law has hitherto been made to protect them, though every boy who takes his dogs to the woods to draw home fuel on a sledge or catamaran, as it is called, very unceremoniously wrenches a stick or so out of the first fence in his way, and will even

* The aspen, the alder (common), and the elm and beech, are all, according to Anspach, natives of this island. The aspen, poplar, and the alder, certainly are plentiful in some parts of the country, but I have never yet seen the elm or the beech, excepting ulmus montana, the wych hazel, or elm, which is very extensively used in frames of vessels and in the principals of roofs. It works smooth, is tough, and very strong and lasting, and grows all over the island. The frame of the fine vessel, Mary Hounsell, built this year at St. John's, was cut on Belleisle, in Conception Bay.

deliberately cut down a whole pannel or length, if there is a better road to be had through a field than the common highway.

Having thus briefly noticed the useful trees and shrubs, it will take us but little trouble to mention those plants of a more humble character within our reach, which either administer to that English necessity, comfort, adorn the desert here, or ornament the garden.

Cucumbers and the vegetable marrow are raised without much difficulty, and I have succeeded by care in rearing even the tender tomato. The melon is also reared, but from the transitions of the climate will not stand the open ground so well as in Upper Canada, and is very expensive in manure.

Potatoes thrive everywhere, and from one rowan potato, cut into pieces, I have had a crop of one hundred and eight good-sized tubers. Cabbages, cauliflowers, brocoli, lettuce, spinach, cress, the American evergreen cress, which tastes like water-cress, beet, parsnips, carrots, peas of all kinds, Windsor bean, kidney and French beans, and thyme, mint, savory, in short, all the British culinary plants and herbs, grow as well here as in Canada. The garden strawberry and raspberry of every

variety thrive without more than the usual care.

Amongst the ornamental flowering plants, native to the country, and introduced in gardens, is the guelder-rose-leaved spiræa, which much resembles the guelder rose, only that its white flowers are more spread and open. There are also other spiræa, as tomentosa, and salicifolia. Of the common stingless nettle, urtica Canadensis, there are many pretty varieties. In the tribe of lilies (lilium), Solomon in all his glory exceeded not the beauty of those produced in this unheeded wilderness. Lilium Philadelphicum is almost the same in appearance as the common orange lily. L. superbum ornaments some of the ponds, and is orange with dark blue spots. L. Canadense also grows in wet places, and has a loose collection of yellow or reddish flowers, maculated darkly. The iris or wild flag (iris versicolor) is a superb flower here, and very common, its rich blue dotting every marshy place in the flowering season. Sisyrinchium anceps, or the blue-eyed grass, also assists the rich display.

Of the violets, I can only say they are very common, but not odorous like their European congeners. There is also the erythronium

Americanum, or yellow dog's-tooth, in shady, wet woods; and of the heart's-eases I can only observe, that when once they get into the garden it is difficult to get rid of them.

In convallaria, there is bifolia or Solomon's seal, umbellata, and stellata, or the star-flower, one growing in dry, the other in wet soil; trifolia or three-leaved, in swampy places, and racemosa or great Solomon's seal, with its sickly green flowers and red berries.

The lily of the valley (dracæna borealis), which is sometimes classed amongst the convallaria, also rears its modest head, and is here introduced into the gardens, in which it flourishes. Jacob's ladder, smilax peduncularis, with its globe-like coronal, and succeeding cluster of small dark berries, may be easily recognised in the marshy bogs; when bruised, it emits a very singular and unpleasant scent.

Trillium pictum, or the painted herb, is a very common flower in the woods. The flower, which is on a low stalk, between three leaves, is white, with a pretty red mark near the bottom.*

* Asclepias Syriaca, Indian hemp, or milk weed, is a lovely wild flower, and viburnum opulus, or oxycoccus, the tree cranberry, which has bunches of white

The woods also produce sarsaparilla, (aralia medicaulis,) the naked root of which is so valued a medicine.

The columbine, (aquilegia Canadensis,) is a wild flower here, growing abundantly. I have seen the cowslip, (calthea palustris,) but only in my garden, where I believe it to be wild. The butter-cup (ranunculus acris) is in every meadow; and, of the nymphæcæa, there is odorata, the white pond-lily, and nuphar advena the yellow water-lily. Althæa officinalis, the marsh mallow, grows very large, and some of the saxifrages or rock herbs are found. Of the geum tribe are several avens, the purple, upright, etc.; and in the potcutilla family are numerous varieties, rivalling those of Canada, p. argentea, or silver five-fingers, Canadensis, five-fingered plant, Norwegica, cinquefoil, etc.

Lupinus perennis, the wild lupine, attains a vast size when cultivated, as is the case with all the leguminosa here. I have seldom observed a finer flower. In my garden it is a perfect bush, some feet in height.

flowers succeeded by bunches of oval, rosy, red berries, is a splendid plant; and the humble but beautiful Epilobium family are richly spread both in Newfoundland and in Labrador.

Of the false acacia, a plant flourishing everywhere in Upper Canada, (robinia pseudacacia), the locust tree, I have seen but one plant, and that carefully protected in a pleasure ground.

Natural clover, trifolium arvense, pratense, and repens, the field, the red, and the white kinds, are common, and the vetch (vicia), both in Newfoundland and on the Labrador shore, covers the sandy banks near the sea to such an extent, that vessels on the latter coast requiring fodder, send their boats ashore to gather this rich natural crop; and sheep, in the neighbourhood of St. John's, are turned loose to a desert place near the Cape Spear Lighthouse, to fatten on it. Wood sorrel, oxalis acetosella, the false heath, Hudsonia ericoides, linum Virginianum, abound; and the wild flax, the cockle sand-wort, chick-weed, carpet-weed, knot-weed, joint-weed, bind-weed, are also common enough.

But of all the natural productions of the swamps none is more singular than the water-bearer, pitcher-plant, or side-saddle flower, Sarracenia purpurea, so named after Dr. Sarrazin of Quebec, which is an herbaceous perennial. Its leaves are tubular or pitcher-shaped, and are always filled with about a wine glass-

ful of the purest water, in which many insects find a grave, and as the receptacles are lined with inverted hairs, preventing escape, it is probable that these insects contribute to the food of the plant.* The flower is purple, large, and handsome.

The azalea, or honeysuckle, is said to grow wild, but I have hitherto observed it only in gardens; neither of the rhododendron nor rose-bay can I speak otherwise at present. The rhodora Canadensis, or false honey-suckle, is however found here.

Amongst the campanula, or bell-flowers, there are several rich varieties, as aparinoides, or prickly campanula, perfoliata, or clasping, and rotundifolia, or the pretty hare-bell. We have also the dock, the plantain, and burdock, etc. Several species of asters and carduces; the latter sometimes pretty, but, like all thistles, are very troublesome; and the well-known

* Anspach observes that the flower, shaped like a lady's saddle, is surrounded with a vast number of pitchers, the lids of which expand or shut according to the necessities of the plant, &c.; these pitchers are of so strong a texture that they bear heat enough for some minutes to boil the water in them.

Michaelmas daisy covers the borders of woods and open places. The little "wee bonny daisy" is very common near gardens and fields, and has probably been introduced with hay and clover seeds.

Helianthus tuberosus, the Jerusalem artichoke, and other of the sun-flower family, thrive well, some of the dwarf kind being wild. The dwarf dandelion (leontodon taraxacum) is one of the most difficult of the garden and field weeds to eradicate here; I have seen a hay-field literally white with it when in seed. Its root is sold at St. John's, in spring, by children who gather it in the gardens and fields, and in the absence of other fresh vegetables, after a long winter, it is much relished as a salad. The birds which live on groundsel (senecio) are well provided with it here.

The golden rod (golidago) of many kinds thrives, as does the tansey (tanasetum). I think I have mentioned the dog-wood, but not the maple guelder rose (viburnum acerifolium); the latter, however, is, as far as I know, only seen in gardens. The asclepias or milk-weed is common.

Of the convolvulus family are several species,

such as stans, dwarf, morning glory, and sepicum, field bindweed. The fox-glove (digitalis) grows splendidly in the gardens, and is also wild. The field thyme (clinopodium vulgare) scents the banks in many places, as well as that species of Collinsonia called horse balm, and mentha-borealis (horse mint); nepeta, or cat-mint, is abundant.

In sheltered gardens all the common English flowers thrive, and even the dahlia, by covering its roots in winter, does very well. In fact, most of the flowers are larger and more spread than their originals, although perhaps not so odorous. The rockets are truly splendid. In general the perennials, it may be observed, do better than annuals, as the summer season is short, and often delayed in its commencement.

The maiden hair (adiantum pedatum) is a little trailing plant, seeking sheltered places, and is one of the most beautiful of the family of filices, or ferns. It bears a little fruit, white, and like an ant's egg, which contains so much saccharine matter as to be lusciously sweet when made into a jam or preserve. It is occasionally brought to families here by the girls who follow the berry-picking trade; but

is preserved, and not used for capillaire, as in Canada. The snake-root is said to be common, by Anspach, but I have not seen it yet. Lady's slipper (cypripedium humile) is very common in the woods, and so is orchis spectabilis.

As might be supposed, the juncus, or reed family, is sufficiently diffused in so swampy a country; j. effusus, the bulrush, tenuis, and many other species, being found. Helonias dioica, the star-plant, and some of the uvularia, or bell-worts; the water arum; zostera marina, or sea-grass, wrach, and triglochin maritimum, or sea arrow grass.

Amongst the gramina are agrostis canina, dog-grass, and several others of that family; aira flexuosa, hair-grass; alopecuras prætensis, meadow-grass; anthoxanthum odoratum, sweet vernal grass; aristida dichostoma, bearded grass; and a very great variety of European and American grasses. In fact, Newfoundland is naturally a country adapted for these plants, producing them and encouraging their growth from the qualities of its soil and its humid climate. Panicum, or hay-grass, and phleum, or hay meadow grass, are either indigenous or have thriven well.

I do not know if the phalaris Americana, or ribbon-grass, grows wild, but it is a troublesome tenant of the garden. The poa family is numerous here, and so are the cyperaceæ in carex, or sedgy grass; and eriophorum Virginicum, cotton-grass, or a variety of that kind, nods over all the bogs and swamps. The rushes, scirpus, and shænus, are equally well spread over these regions.

In the cellulares, or flowerless plants, there are several kinds of equisetum, or horse-tail rush; maiden-hair, already noticed; aspidium, or the brake fern; ophioglossum vulgatum, or adder's tongue fern; pteris aquilina, common brake, etc.; and many, no doubt, not hitherto described.

Of the lycopodiums, l. apodum, or club-moss, and complinatum, or ground pine, chera flexilis, and vulgaris, or featherbed plant.

The lichens, amongst which are negro-hair (alectoria jubata), the shield lichen (parmelia), many mosses, said to amount to above a hundred, and the algæ, or marine plants, are not hitherto described, and afford a fine field for the botanist.

On reflecting upon the paucity of information contained in a section of a work like this,

devoted, too, as it is, expressly to the natural history of a new country, it is necessary to observe that neither time nor opportunity for other than the most casual observation has been afforded to the writer, whose sojourn has been too brief, and whose acquirements are necessarily limited in such varied branches, all requiring deep study, and each almost the work of a man's life to attain. He feels that he is merely as a wanderer in the path. He has struck upon a broad road, which is now available for those who may separately devote themselves to elucidate the different divisions into which animal and vegetable life, as well as inanimate nature, appear to be so largely distributed over Newfoundland; and which this imperfect notice may lead their separate knowledge to bring to perfection.

It has been said that a Swedish naturalist, who has been sent by that northern government to this island, for scientific purposes, and also to examine a little into the mode of conducting the extensive and lucrative fisheries, has ascertained, during a residence of nearly two years, without penetrating the vast and hidden interior, that there are five hundred species of the birds alone inhabiting or

visiting Newfoundland. The quadrupeds are comparatively few; but no doubt all the mammalia of that class, denizens of Labrador and Lower Canada, will be found here.

That the reptiles should be absent, presents a feature as singular as that of Ireland, which, excepting in climate, Newfoundland much resembles,—in its broken and iron-bound coast, in its verdant prairies and boggy savannahs, in the absence of very large timber, in its stormy seas and plentiful supply of fish, whilst its soil is peculiarly adapted to the cultivation of the potato and of the grasses.

Amongst the many singularities which strike us, as to its dissimilarity from Canada, to which it is the frontier and key, is the remarkable one, that the pheasant—partridge of that country and of the American continent adjacent—should be wanting here, and that its place has been supplied by the northern grouse, which finds in Newfoundland the berry-bearing shrubs, the buds, and the leaves upon which it exists in the colder regions of Europe; or rather, that a bird of the same kind as the northern grouse should exist amidst plants, if not actually the same as those of Europe, at least congeneric.

But that this bird, the northern hare, the seal,

the white bear, the weasel, and several other creatures, should be protected, not only from man and the deadly gun, but by having their clothing adapted to the seasons, and by thus being secured from the voracious falcon, the hawk, and the prowling beast of prey, and should be rendered capable of securing their own food better by a resemblance to the snow and ice in winter and to the barren moor in summer, is truly an adaptation of means to an end which must strike the most thoughtless observer with wonder, at the manifestation of all-pervading Wisdom, which constantly passes under our notice, even did it not excite, as it should do, those feelings of awe and reverence which the intelligence that has been so graciously allotted to man ought ever to inspire him with.

I think it was White, that amiable reasoner, who passed a happy life in observing nature in a small and secluded English parish, almost unknown to the rest of the world, who reflected upon this provision for the safety of the grouse and fur-bearing creatures, and assigns one cause of great consequence for this great boon to them, by shewing that it conduced to their comfort as well as to their security. He cites, as a philosophical fact, that bodies of a white

hue part from their latent heat by radiation very slowly, but that they reflect heat quickly; and that dark substances reflect heat slowly, and part from that contained in them rapidly.

But White did not go far enough. The grouse, and the fur-bearing creatures of cold regions, obtain a new garment, not only white, as winter approaches, but more hair-like and close. The grouse gets clothed down to its toes with hairy feathers, and all the fur creatures, and even the dog, get a close waistcoat of short down, in addition to their usual hair, or pelt coating.

Now, if two creatures, one black or dark coloured, and the other white or nearly white, be placed in a temperature of a higher degree than that of their own bodies, the heat will immediately enter the body of the black one, and elevate its temperature very much above that of the other; but alter their position, and put them in a temperature lower than that of their bodies, the white one will very slowly indeed part with its natural heat, and the black one will very quickly give out almost all it has by radiation to everything near it colder than itself.

I have seen this law so curiously developed

in Canada, that, in riding in a sleigh with a stout person, where both were exposed on a long journey, in an open vehicle, to a frost several degrees below zero, my friend, whose natural temperature was much greater than that of my own spare habit, felt exceedingly cold, whilst I was unconscious of its intensity. I had on a white great coat, and he a blue one; and my friend being a good-humoured, excellent fellow, he jocosely remarked, that he would never go a long winter journey in a sleigh with me again, as I abstracted all his caloric.

But such reflections lead us still further to inquire into the mysterious operations of nature. It is not in the lesser animals alone that we see the effects of such a wise provision, for it renders a fact clear to the senses which appears at the first blush to be anomalous.

The world we inhabit is peopled by a variety of races, of every shade of colour, from almost a dazzling white to an equally resplendent black. The hotter regions are usually inhabited by the latter, and the colder ones by the former. The copper-coloured American and the equally dark Tartar are not exceptions, but variations from the general arrangement; and whilst the American Indian can go perfectly naked with-

out inconvenience in summer, he protects himself usually in winter by furs, and by rubbing his body over with grease and paint. So did our British ancestors: they coloured themselves with blue pigments to avoid the extremes of climate; and hence, perhaps, as much as from vanity, so inherent in human nature, arose the custom of tattooing.

What a surprising beneficence, then, has been extended to such inferior animals as the ptarmigan and the hare, when an increase of plumage and an extra coat of fur, with a corresponding change of colour, tend to render their being happy, by limiting the loss of vital heat, and enabling the creature, by forming its home in the snow, to counteract the increased demand for that internal warmth which the season requires!

The black bear, and other dark animals, retire from the influence of the atmosphere, and by another still more curious law, sleep away a period which would be fatal otherwise to their existence, either by their incapacity to procure food, cr to maintain the vital principle. The very dog, in this and other cold climates, gets the short close fur in winter, and is moreover generally housed at night, when the tempera-

ture is the lowest; and it has struck me forcibly, that from a similar necessity, the ventral regions of almost all animals, whether birds, beasts, or fishes, are either white or of a lighter colour than the body, thus protecting the vital parts when the animal rests on the ground, flies in the sun's rays, or swims in the water. The soles of the feet and the palms of the hands of a negro, are also lighter than the rest of his skin; and the chest of a white man exposed to the air, is soon covered with hair.

The changes in the furs of animals and in the feathers of such birds as the snow-bird of America, do not occur rapidly; they are gradual, and they gradually prepare them for the season they are fitted for.*

* After this work was completed, on the 9th April, 1842, some small farmers from Outer Cove and Torbay brought me a large white bear to look at, which they had killed about two hours before, at a distance of five or six miles from St. John's. This animal is now seldom or never seen in the explored parts of Newfoundland, and I could not help being struck in viewing it, at the singular fact of the white bear being endowed with the faculty of remaining in a state of action during the severe polar winters, whilst his other congeners of the black or brown kind sleep away a season in which, from their colour, they would be exposed to intense suffering from cold.

I afterwards went to trace for several miles the

The more, in fact, we search into nature, the more we are surprised by the admirable arrangement and simplicity of its operations.

track of this animal on the snow, and it appears to me that he must have landed from the ice near the capital, on the south shore, the ice being then in endless fields floating from the northern regions, and that he was, when killed, making his way by a natural instinct across the country to the northward, to get into the cold climate of the icy sea again. He was very white, very large, and very fat, and had alarmed all the dogs on his night march in passing the scattered farms, many of which he passed close to the doors. His skin, a very fine long-haired one, was purchased by his excellency, the governor.

PART III.

PHYSICAL HISTORY.

CHAPTER VIII.

CLIMATE AND METEOROLOGY.

THERE is nothing in which the climate of Newfoundland* differs more from that of Canada and the adjacent provinces, than in its extreme vicissitudes. Spring comes more slowly than in Canada, the summer is shorter, the autumn less certain, the winter a series of storms of wind, rain, and snow; the last rarely remains on the ground for any considerable length of time, and the frost is

* The spring of 1842, as far as May 3rd, has been unusually severe, and the climate is not to be judged by it. A snow storm happened on that day unparalleled for its force and intensity; I never suffered out of doors in any winter in Canada so much as on that day, but this is almost unprecedented.

never, or very rarely, so intense as it is in Upper Canada, many degrees more to the south.

All this may, perhaps, be accounted for by its insularity, and its lying at the embouchure of the great valley of St. Lawrence, whilst the frozen and desolate regions to the north-west of Labrador and Hudson's Bay, cause the prevailing winds to sweep over it, loaded with a varying and reduced temperature of the air; and then in the early spring vast masses of ice from Hudson's Straits and East Greenland, are forced along its Atlantic coast by a southerly current, where they consolidate or grind, until they are eventually forced off by milder air and by the increasing warmth of the ocean, where they are sunk in the tepid waters of the gulf stream.

A remarkable circumstance occurred this winter (January, 1842),* when it was proved

* In fact, this whole winter has been a curious one, and is not even yet finished, on the 22nd April, 1842, for we have to day a hot sun and deep banks of snow, whilst a vessel just arrived, gives the following curious account of the largest iceberg which has probably been ever seen, being very near St. John's. I copy his statement from the "Newfoundlander," of April 1842:—

"Captain Hardy, of the brig, Lady Turner, arrived

by a master of a ship, who had had long experience, that the gulf stream waters had divaricated from their usual course, or rather, perhaps, had spread out until they reached very nearly to St. John's; the water of the ocean having been so warm in the early part of that month, that the sailors in his vessel felt a positive pleasure from ablution in it, although the thermometer on shore was then frequently at zero, and the winds very chilling from the north or south-west.

If the laws of climate were regulated by the thermal zones which philosophers have drawn round the globe, Newfoundland would be an abode for man, equally free from great heats

from Cadiz on Saturday last, reports that, on the day previously, the Bay of Bulls bearing about W.N.W., distant twelve miles, he saw an immense iceberg, lying S.E. and N.W., which, from the length of time it took him to pass it—viz., three hours, going at eight to nine knots—could not have been less than twenty-five to twenty-seven miles long, and wore the appearance of the high land to the north of the Bay of Bulls.

"We believe this iceberg to be of unheard-of size; but there can be no doubt of the correctness of the report, as it was seen by the Euphemia and Mary Anne, whose masters fully confirm Captain Hardy's account."

and from intense cold, as it lies in nearly the same parallels as France; whereas, it has the general temperature of the European countries situated fifteen or twenty degrees higher than the northern shores of that fertile country.

Various attempts have been made to account satisfactorily for this seeming anomaly between the climates of the old and new world. Kirwan, with great justice, admits that the latent and retained heat of the earth is a powerful agent, after that of the solar radiation, and that elevation above the ocean, the size of large tracts of water, and the nature of the soil, operate very powerfully in contributing to those vicissitudes of the atmospheric regions which we denominate winds. It is very probable therefore that the sun, in its survey of the ecliptic, diffuses equal warmth in the ratio of his distance between the torrid and the frozen zones, but that his influence is counteracted by the shape and nature of continents and oceans. America, moreover, is covered with a mantle of forest, and is girt on its whole western frontier, from Patagonia to Behring's Straits, with a belt of lofty and rocky mountains, reaching, in most cases,

above the regions of the air where eternal frost is known to reign.

The covering of trees prevents the access of solar heat. The ice-clad mountains pervade in North America, not only the Pacific littoral, but occupy the whole continent of America, in its broadest part, from that coast to the wild regions of Labrador and the frozen North. The east coasts of Labrador are amongst the most lofty of sea mountains, or perhaps in equal extent, the most lofty in the world, clad with snow and ice, and visible for upwards of one hundred and twenty miles at sea. The colour of ice and snow also tends to assist in modifying the circumambient air.

The theory of winds is still, however, in its infancy, but that they are affected in their passage over such howling wildernesses, cannot be doubted. In Canada, and everywhere in North America, a wind from the north-west invariably lowers the thermometer, and in winter causes excessive cold. Canada, Labrador, and Newfoundland, are the regions of lakes; and these, when frozen, of course increase the fury and bitterness of a storm from that quarter; but although Newfoundland is but little removed from Labrador, the coldest

country in the world, and from Cape Breton and Nova Scotia, where frost reigns in all its vigour in winter, it is not so cold as other parts of the American continent lying many degrees further to the south.

The thermometer rarely falls to zero in winter, which lasts from the beginning of December until the middle of April; January and February being the coldest months, and the latter the most stormy.

The most remarkable feature of its climate is the preponderance of severe gales on the land, not extending far over the ocean, but sweeping with irresistible force over the broken country, either from the north or the south-west. The winter of 1842 has been remarkable for this phenomenon. Scarcely a day passed in January without a gale which in England would have been deemed serious; yet such is the conformation of the land, that, stretching into mountainous hills and deep valleys from north-north-east to south-south-west, these storms are broken in their force, and do comparatively little damage, whilst they very fortunately blow off a coast dangerous enough in itself at all times.

The north-east winds are also very heavy

but less frequent; they are cold, but not so cold as the former, for they have to traverse a vast extent of open sea after leaving the frozen regions of Europe before they reach us, and in consequence expend much of their cold in imparting it to the surface of the ocean.

The forests of the American continent and of Newfoundland, although they operate against the climate, by preventing the solar heat from reaching the soil, and by the immense evaporation necessary to their existence, have also an advantage not sufficiently appreciated by the industrious emigrants and dwellers in these new territories. They assist to modify the excessive rigour of the winds, and to keep up an artificial heat, as it were, by multiplying the obstructions which impede the action of the air with the earth's surface, so that the ground retains its latent heat, much as an animal clothed in fur does; and in summer, vegetation is preserved and assisted by this veil of foliage in its insensible perspiration, which the sun's heat increases and converts by evaporation into a temperature cool enough to answer the well-being of the plant.

It is a sort of rage in America, particularly

in Canada and Newfoundland, to destroy the forest as rapidly as possible. The fact is, the poor emigrant coming from Europe, where wood is very valuable, and where he never probably owned a good walking-stick, conscious that the treasure thus placed at his unlimited disposal is inexhaustible, without much reflection, proceeds to clear the wilderness for the cultivation of his farm. The incalculable benefit that would arise to his cattle and to himself, by leaving patches of forest trees here and there, never troubles him; he uses the trees as men use the water of a river, merely because there is plenty of it, and he forgets that the ponds or rivulets which are to supply the fainting beasts with beverage, in the exhausting heats of a transatlantic summer, will soon dry up when deprived of the support and protection of the forest.

Although it will not at all surprise the naturalist, yet it is useful to inform the emigrant to these regions that mankind in general are not aware of the vast influence of trees on climate, and that they are actually chemical instruments, for the formation and distillation of dews and rain. This is peculiarly the case with those growing on elevated situations, and in countries

subjected to mists. Trees demand a large supply of moisture for their organic development, and this is again given off by perspiration from their leaves, which answer the same purposes as the human skin. Experiments have been carefully made, to prove that a small tree, weighing not more than seventy pounds, absorbed fifteen pounds of water in six hours, and that branches of only an inch in diameter, and five feet long, took up from fifteen to twenty-five ounces in twelve hours, when in full leaf; but, deprived of their leaves, the absorption was not more than one ounce in twelve hours. It is, in fact, perfectly surprising how much water a single tree will distil in the course of a night.

This applies chiefly to those forest trees which shed their leaves annually,—for evergreens, as they are called, which shed their leaves also annually, but imperceptibly, such as the fir tribe, do not imbibe so much water by the leaf as they do by the trunk and branches. In short, forests are always humid from this property of imbibition, perspiration, and condensation, which checks the evaporation from the earth.

Nothing can prove these facts more clearly than to observe in Canada the state of those portions of the country which have been cleared on a large scale. I have observed the beds of streams, which would have been called rivers in England, and which bore all the traces of having been small cataracts formerly, completely dried up; and it has been remarked, that after a forest has been taken off elevated ground, the quantity of rain in the neighbourhood sensibly lessens, perhaps in consequence of there being less electric attraction between the clouds and the ground.

Murray observes that trees, by condensing the air in thick weather, must materially affect the climate, and that therefore thickly-wooded countries must necessarily be colder and more humid than naked or barren savannahs; whilst trees, being conductors of atmospheric electricity, the climates of cold countries will necessarily improve where agricultural operations are carried on upon a large scale.

This has been controverted by Dr. Wynne, in his "History of America," who, without sufficient reason, asserts that the woods are not the cause of the coldness of North America,

but that it is owing to the great extent of its barren solitudes, its rocks and mountains, and vast lakes.

People in Newfoundland also perceive, that the "barrens," as every waste ground denuded of wood is there called, are infinitely colder than the forest lands. The reason is very obvious, from the natural causes above cited. The icy winds sweep over them unresisted.

But that Newfoundland is not a cold country in the American sense of the word, will be proved by facts. Any European arriving at St. John's, the most sterile and open part of the eastern coast, in winter, will be struck if he walks abroad, to see the labouring poor coming from and going to the woods nine or ten miles off, with their sledges drawn by dogs, and occasionally by little horses, with scarcely any other than their ordinary clothing on. I was told by a respectable small farmer, whom I met one bitter cold day, riding on his catamaran or sledge, in an English smock frock, that, except flannel next his skin, he never wore any other dress when working abroad.

There are severely cold days occasionally in January and February, and they are made more bitter by the strong sweeping winds. If the

cold were as intense as it is in Western Canada, a country much further south, and the same winds prevailed, the open parts of the country would be actually uninhabitable.

The frost, moreover, does not penetrate the ground here as it does there, where it has been known to go three feet down; here it is rarely more than a few inches, and soon breaks up.

The worst weather is when a strong northerly or westerly wind is accompanied by a severe snow storm, which is usually the case when the snow falls for any length of time. Then the icy particles are driven about so fiercely and so thickly that it is almost impossible to see or even to breathe freely. These states of the atmosphere are, however, not very frequent, and very little snow lies on cleared places, in consequence of the strong winds, and the tendency to moisture and rain in winter.

Another phenomenon, seldom seen in Canada, is the silver thaw, as it is called in Newfoundland. Rain in heavy torrents in February, accompanied by a low state of the thermometer near the earth, causes a regular deposition of ice round all the branches and twigs of the plants and trees, and every substance capable of receiving it. This goes on increasing until

a layer of ice envelops the smallest twigs, till it attains a diameter of half an inch, and sometimes more. The leafless trees droop and bend their strongest boughs towards the earth, to which, if they reach it without breaking from the enormous weight they have to sustain, they become frozen. I have seen willows, whose branches were as thick as a man's thigh, break off under this pressure. The wind generally rises soon afterwards, and then the clatter and destruction may be conceived.

I can compare the appearance of a tree thus unwelcomely adorned to nothing in man's art nearer than to a vast chandelier of the purest crystal, and the play of the light is fully equal to that from myriads of prisms, when the sun shines.

Fruit trees and shrubs are seriously injured by this silver thaw, which very fortunately is rare. In the winter of 1841 (February) it did great mischief.

Not having yet seen any extensive forests of the deciduous trees in this island, I cannot judge whether an appearance exists here, which very much excited my attention in Canada, both as respected the hard wood trees of that

class, and the soft evergreens, or firs. There are, in fact, no opportunities, until extensive roads are opened here, for observing it.

When riding in a low sleigh, particularly in Western Canada, along a line of country long cleared, one is struck, as the vehicle moves rapidly along, by observing a continued straight line on the edge of the uncleared forest land, at a height of seven or eight feet above the ground. This line is so clearly defined in the evergreens that it at first struck me it was caused by the cattle having bitten off all the shoots, as high as their heads could reach, and thus leaving the trees branchless to that height. But then again, it was too constant for one to believe that that was the cause, particularly as they would not browse on many of the fir kind. It is effected by frost, which destroys the foliage and young shoots near the surface in the younger states of the plant; as it is now clearly proved that cold has a more serious effect upon vegetation, within a few feet of the earth's surface, than at a distance above it; but I had no notion that it could have reached uniformly to seven or eight feet, until I read in an English work, that such has been observed

in England in very severe frosts, in a space of several acres, where the buds of the oak were cut off to that height, and the rest of the opening foliage uninjured, whilst the frost appeared always to have injured or destroyed garden shrubs and plants in low situations more than it did in higher ones. The evaporation was carried on more rapidly in one instance than the other.

In Newfoundland, it is surprising how garden plants, and insects which feed on them, brave the winter, and the effects of the sudden thaws, for here, in winter, the transition from severe frost to torrents of rain is sudden. The snow, too, where it lies deep, which it seldom does near the coast, excepting in drifts, begins speedily to feel the latent heat in the ground, and decays first at the bottom layers; whilst the warm air dissolves its upper crust, so that volumes of fluid are soon generated, and a river which has been closed the evening before solidly enough to bear a horse upon it, is found next morning running in foam and fury.

In the woods and rocky places, the snow remains much longer, and, in spring, vegetation is often checked by the sudden appear-

ance off the coast of an immense belt of ice from the Polar regions, and by stationary icebergs, which ground on the shallows.

The ground, as before observed, does not freeze to any depth,* and therefore, some out-of-door excavations can generally be made for building or other purposes, provided the place chosen is not where rock is near the surface, in which case the earth will freeze to ten inches or a foot in depth, the porous sandstone under it acting as an excellent ice-maker.

We find that the extremes of temperature in Newfoundland are trifling, when compared to those of Canada. There, the thermometer falls as low as 27 degrees below zero, and even lower at times in winter, and rises to 90 degrees in summer; here, the lowest temperature in winter scarcely exceeds zero, or 8 or 10 degrees below it, excepting upon rare occasions, and in the height of summer does not attain more in common years than 79 degrees.

* As a proof of this, parsnips and potatoes will remain in the ground all winter, and be fit to eat in the spring, as I have twice experienced, and it is a common practice to let the parsnips remain out all winter, purposely to have a supply in spring.

Winter may really be said to commence here towards the latter end of November only, though fires are comfortable adjuncts during most of that month, and its severity begins after Christmas, runs through January and February, and becomes less and less stern, until the middle of April, when it ceases altogether. In the winter of 1840, ploughing was going on after Christmas. This winter 1841-1842, has been unusually changeable, and deluges of rain, storms of wind, and some share of snow have characterized it; although the latter has not enabled the hewers of wood to bring their supplies in, until very late in the season. March has also been a very cold month, and characterized by an unusually furious snow-storm.*

* On the evening of Good Friday, March 25th, with the thermometer at 30°, and wind north-east, a most unusual appearance was exhibited at sunset, about twenty minutes past six. The western sky was in a blaze of roseate and fire-coloured angry light after the sun dipped, which was reflected on the eastern or sea sl.y to a great extent, and just as the sun had disappeared behind the hill, a perfect bow appeared in the east, having, not the usual rainbow hues, but modifications of red from the fiery to the roseate; it was a perfect arch of the usual size and height of

It is generally supposed in England, that Newfoundland is constantly enveloped in fog and wet mist; nothing, however, can be further from the truth. The summers are frequently so hot and so dry, that for want of rain the grass perishes; the summer of 1840 was one of these;—and the nights are usually splendid; whilst, in winter, fog is very rarely seen.

The fog being generated at sea, by causes which do not operate upon the land, is a true sea-mist, which may be observed in a voyage across the Atlantic, all the way from the west coast of Ireland, by keeping in a high latitude, until the vessel reaches Newfoundland. I was nearly two months in making this transit, owing to having kept so high, probably from the course lying in that vast current of water

rainbows at sunset. The previous evening, the eastern sky at sunset was beautifully coloured with purple and red, down to the horizon, whilst the western was not; the thermometer varied only two or three degrees above or below freezing all the time: yet both these appearances were succeeded by only slight thaws; there was a vast quantity of snow on the ground, and the sea was covered with white ice near the shores, but neither rain nor snow fell. There were slight auroras both nights. I think the bow must have been a reflection from the sea ice.

which expends itself, by turning from the banks of Newfoundland, towards the Polar regions, and crossing over to Europe; there the water would generally be warmer than the air, because the current of air coming from the Arctic Circle, is fraught at all times of the year with cold; the opposition of the two, makes fog, which is perceptibly saline.

Again, along the coasts of Hudson's Bay, Labrador and Newfoundland, there is a southerly set or current, which runs very rapidly from East Greenland, and the adjacent seas, bringing with it waters much colder than those natural to the latitude of the Newfoundland seas; so that when the temperature of the air near the shores is greater than that of this broad current, fog again forms; and thus both in summer and in winter, the space of ocean, from the outer edge of the shallow water of the banks to the eastern and southern shores of the island,—is frequently enveloped in fog, a provision of nature which probably increases the security and multiplication of the endless stores of fish and marine animals treasured in that gloomy region.

Dr. Kelly, R.N., a very able observer of

nature, who is attached to the surveying service conducted by Captain Bayfield, has written much in the transactions of the Quebec Literary and Historical Society, upon the atmospheric phenomena of the St. Lawrence, where the same fogs prevail for the same reasons, as far as the tide-waters of the ocean ascend that father of rivers.

Dr. Kelly observes, that the temperature of the St. Lawrence differs greatly at different seasons, but that the changes in the winter are both gradual and slow, compared to those of the incumbent air, which are very sudden and very great; whilst the water does not uniformly follow the changes of the seasons themselves, but is much influenced by certain peculiar circumstances, and by the strength and direction of the winds, and that when free from these disturbing causes, it acquired its maximum temperature about the beginning of September, the mean maximum temperature of the air being in July.

To shew the variability caused by local effects, on the 8th of July, 1831, Dr. Kelly observed the water, in a broad part of the river, after some days of warm weather,

was, in the middle of the estuary, as high as 60 degrees on the surface. A freezing westerly wind blew all night, and on the morning of the 9th, the surface-water had sunk to 39 degrees, the air being affected no more than from 64 to 62 degrees.

He experimented upon the temperature of the water at different depths during these changes, and found, as is well known, that the gulf and river water at certain depths was uniformly cold. When the surface was at 60 degrees, 30 fathoms only beneath it was at 35 degrees; and at 50 fathoms only 34 degrees. On the 9th, when the wind ceased, a calm ensued, which immediately raised the surface-water to 57 degrees, and then the lower strata were successively found to average at one fathom, 44 degrees; at 10 fathoms, 38 degrees; and 100 fathoms, 35 degrees.

By other experiments, Dr. Kelly found that part of the river little influenced by tides, to maintain, during the maximum in September, an average temperature of 62 degrees, which was very constant; whilst he also found the river when frozen over, to sink to 32 degrees. Hence he argues, that in calm fine weather, the warm fresh water of the river and its tributaries

floats on the surface; but when it is agitated by storm, it soon mingles with the permanently cold water of the lower strata.

The easterly gales also, he says, cool the gulf waters much more than the westerly ones, for an obvious reason, that they act over the base of the triangle formed by Newfoundland, and the shores of the gulf, whilst the others only pass over a long string of river connected with the apex.

But no doubt the easterly winds are also powerful from another cause; they bring the permanently cold water of the Straits of Belle-isle, where icebergs hang all the year; and they also bring the cold water of the South shores of Newfoundland, and the coasts of Cape Breton more powerfully into the gulf.

The fogs of the St. Lawrence are formed, therefore, from these different states of the sea, of the tide part of the river, and of the air, mingled with a reflux of the tidal wave, which forces up to the surface in the narrows of the river much of the cold oceanic water. Thus the flood tide at certain places is colder than the ebb, and the whole tidal part of the river and gulf has a comparative low temperature throughout the year.

The great indraught of the straits of Belle-isle, renders the northern part of Newfoundland much less fit for habitation* than the eastern, the southern, or the western shores; for here there appears to be an arm of the great current from the frozen north, sucked in, as it were, from the main body, which proceeds south along the coasts of Newfoundland, and is in all likelihood a part of that immense oceanic river, if the term may be used, which flows from the Pole to the equator. Thus, the real fresh-water stream of the St. Lawrence, before it finally mingles in the salt wave, lies over their colder strata, and flows in an opposite direction along the south shores of Canada.

I have passed some time in the gulf, and paid much attention to the extraordinary state of the atmosphere, induced by the variabilities of temperature between the air and surface water, which is infinitely greater than anything occurring in the fog regions of the banks, because, on such an expanse of ocean as that

* The current of the St. Lawrence sets out along the north shore of Newfoundland, which renders the waters warmer on that shore than on the Labrador coast opposite, along which the polar current runs.

round the east and south shores of Newfoundland, and between them and the banks, the formation of fog is upon a more constant, developed, and extensive scale, thus causing uniformity; whilst on the west side of the island, and the Gulf of St. Lawrence and its estuary, the combinations are constantly changing, and producing new features. The effects of mirage there are intensely interesting, but very dangerous to the mariner, and arising obviously from the condition of the strata of air immediately over the water. Sometimes the fog is very high and thick; at others, low and thin; again, a mere and almost invisible line of light vapour. Thus ships are distorted into most grotesque shapes, the horizon is altered, and both near and distant objects are seen in totally different forms and positions, as the rays of light are refracted through the different media, or reflected from the fog.

No doubt the immense variation between the warm equatorial waters of the gulf stream, over which clouds constantly hang at a low elevation, and the cold seas above the great banks of Newfoundland, may arise from two circumstances,—the one, from a branch of the Frozen Ocean, or polar current, reaching the banks;

the other, from the influence of the submarine mountains of which those banks are composed, which, rendering the seas shallow, lessen the temperature of the waters above them. Humboldt and many other philosophers have observed, that the ocean is subject to great variations of temperature wherever there are shoals, or where the land is near, and that it generally lost some portion of its heat in those cases, which were usually, however, confined to comparatively deep water.

Thus the great Bank of Newfoundland thrown up, as it were, and forming a part of the great channel through which the polar current passes, and limiting also that of the equatorial, or gulf stream, has its waters not only cooled by radiation, but also by confining, on the western side, the icy current also, which thus necessarily comes to the surface, assists in lessening the temperature of the adjacent ocean in latitudes which, but for this and the great evaporation thus caused, would otherwise be warm. The cold St. Lawrence also throws its mighty stream into the ocean near these banks, and the prevailing winds come cooled, over an immense and frigid continent, for a great portion of the year.

In summer, when the air is warm, over the

banks, constant, dense, impenetrable fog reigns, unless driven off by gales of wind or an equalized state of the air; and so unwilling is the atmosphere to retain this cloud that hangs on the ocean, that it is returned, almost as fast into as it rises from it, in small rain.

The land, or westerly winds, are naturally drier than the easterly ones which sweep over the broad Atlantic, and thus cause greater evaporation from the ocean over the banks when they prevail, which is for three-fourths of the year. In Newfoundland, as in Canada, the land, or north-west wind, in winter, is bitterly cold; in summer, it is pleasantly warm; the sea, or north-easterly wind, cold both summer and winter, in Newfoundland and Canada; south-easterly, warm. Fog on the shores, in summer, prevails with an easterly wind; west and south-westerly winds bring rain.

The east coast and the south shore of Newfoundland are more subject to fogs than the western frontier is; but the sea fog, although it caps the lofty headlands of the coast, rarely penetrates very far inland, or lies very deep in the harbours or shores.

I have examined several registers kept here, and compared them together. It would ap-

pear that the average of *thick* shore fog extending a short distance inland, for 1841 was—

In January	....	one day and a half.
February	....	none.
March	....	none.
April	....	one.
May	....	three.
June	....	two.
July	....	one.
August	....	one.
September	......	four.
October	....	one.
November	......	two.
December	.....	one.

May and the beginning of June are the times when fog usually most prevails on the coast, and then the east wind brings the shoals of capelin or small salmon as bait to the fishermen, who hail that foggy wind as a sure forerunner of a great treasure.

Thus it will be seen, in 1841, there were only seventeen days and a half of thick fog at St. John's, which is more exposed to the bank weather, as it is called, than any other part of the island.

It must not be concealed that there were other foggy days, wherein the vapour was not

so intense or constant, and lasted only for a portion of the day; and that the British reader may form a true judgment of the climate of the eastern and southern coast of Newfoundland, I will add to the above catalogue of fog, the number of days in each month, in 1841, wherein there was partial or light fog.

January	one day and a half.
February	half a day.
March	none.
April	two and a half.
May	three.
June..............	two and a half.
July	two and a half.
August............	one and a half.
September	two and a half.
October	half.
November	one.
December	one and a half.

Thus, altogether, light fogs or mists were prevalent only for a space equal to nineteen and a half days in 1841, which, added to seventeen and a half days' fog, give thirty-seven days of foggy weather on the shore, throughout the year.

Not having been long enough in the island to have been enabled to make a correct table of the meteorology, as far as wind, rain, snow,

fog, temperature, and the aurora are concerned, I shall now merely give a digest of the temperature, or rather, the average of the thermometer and barometer,* for the twelve separate months in six years, in Newfoundland:

	Ther.		Bar.		Ther.		Bar.
Jan. ...	22.7	...	29.6	July ...	57.4	...	29.7
Feb. ...	42.6	...	29.6	August,	58.3	...	29.8
March.	24.0	...	29.7	Sept....	53.3	...	29.8
April ..	33.8	...	29.6	Oct. ...	44.0	...	29.8
May ...	39.5	...	29.7	Nov....	34.0	...	29.6
June...	49.8	...	29.7	Dec....	26.0	...	29.6

The greatest height of the thermometer and barometer, in 1841, during the same period, was—

	Ther.		Bar.		Ther.		Bar.
Jan. ...	44.0	...	30.3	July ...	79.5	...	30.1
Feb. ...	42.6	...	30.2	August,	78.3	...	30.2
March.	47.0	...	30.3	Sept....	75.3	...	30.2
April ..	56.5	...	30.2	Oct. ...	68.3	...	30.3
May ...	62.0	...	30.2	Nov....	57.0	...	30.2
June...	74.0	...	30.1	Dec....	44.5	...	30.4

* This has been carefully compared from the "Newfoundland Almanack" of 1842, with other registers, and is presumed to be as correct as twelve hours' observation will afford. No doubt, during the night, the thermometer has been lower, and at Signal

The greatest depression of the thermometer and barometer, for the same period was—

	Ther.	Bar.		Ther.	Bar.
Jan. ...	–3.0 ...	28.7	July ...	34.8 ..:	29.3
Feb. ...	–4.6 ...	28.6	August.	38.5 ...	29.3
March.	–0.5 ...	28.8	Sept....	33.5 ...	29.3
April..	14.3 ...	28.9	Oct. ...	24.0 ...	29.2
May...	21.8 ...	29.1	Nov....	16.5 ...	28.9
June...	29.8 ...	29.2	Dec. ...	–5.6 ...	28.9

In February 1841, on the 15th, the island was visited by a severe storm of wind, from the W. S. W., with snow; the thermometer fell from 40° to 19°, and the barometer from 29.8 to 28.5.

Thus, February is usually the coldest and most stormy, and July the warmest month in the year.

In the February of this year, 1842, the highest temperature has been 45°, and the lowest, 2°. The barometer stood at 28.8 and 29.4; and, strange to say, this was on the most stormy day of 1841. There was also great rain, with a temperature which varied from 32° to 2°.

Hill, five hundred and ten feet above the sea, it has been as low as –8° when it was only –2° at the places of observation, which are nearly on the same level, and about a hundred and twenty feet above the ocean.

Such is the salubrity of this climate, that Mr. M'Gregor relates, there was living, in 1829, at Marasheen island, in Placentia Bay, Martin Galten, more than 100 years old, in excellent health, and who caught, with his brother, in that year, nine quintals of cod-fish. He piloted Captain Cook into Placentia Bay more than seventy years before that time. In the same place, lived Nancy Tibeau, mother of four living generations; and a Mrs. Tait, who died there in 1819, was 125 years old, and was, with her third husband, at the siege of Quebec by Wolfe.

A woman died lately at Torbay, near St. John's, 125 years old, and before her death she sent for a friend of mine (the medical gentleman already noticed) to see what was the matter with her poor *child*, who was sick,—the said poor *child* being then about ninety.

The most remarkable features in the climate of Newfoundland are, the fogs on its banks,—which do not extend to the shores or inland, there frequently being a clear space or belt next the coast,—and the prevalence of heavy winds.

These latter attain their height in February, and seem almost local, but blow with unmitigated

rigour and duration. Almost all January and great part of February in 1842 there was a constant succession of hard gales. On the 15th of February 1841, the gale amounted nearly to a tornado; it unroofed houses, threw down chimneys, injured the shipping, and committed great havoc at St. John's and its vicinity.

Fortunately, as before remarked, the mean temperature of the air in winter is such as to deprive these gales of much of their horror; as, were the thermometer to sink as low as it does at Quebec, during a tornado of many hours' duration, few houses would be warm enough, with all the fuel applied, to resist their effect. As it is, with a fall of the thermometer only a few degrees below the freezing point, they are almost unbearable, and severe accidents occur to persons who are incautious, or unavoidably exposed to their fury for any length of time; although the proportion of people frost bitten (ceteris paribus) is almost nothing compared to those in Canada and the adjacent continent.

Thunder and lightning are very rare; during two winters, an autumn, and a summer's residence, I do not remember to have observed either. There have, however, been

serious instances of their effects, but very fortunately, these are few and far between; and by the same kind provision of the equalization of the electric matter, the effects of internal commotion, as exemplified in earthquake,—developed, as it undoubtedly is, by heat, which is merely another form of that mysterious agent,—are unknown here, notwithstanding that there is no country in the world where the crust of the earth appears to have suffered greater disruption than in Newfoundland.

But electricity, magnetism, light, or heat, or whatever is the combination, is displayed here in another and more apparently useful form, taking the locality into consideration; for the long, dark evenings and nights of gloomy winter are frequently lit up splendidly by the aurora borealis.

This phenomenon, but little investigated, and less known, is generally supposed to be the most perfect the nearer we approach the Arctic Circle in our hemisphere; but I have long doubted that popular opinion. It may be more permanent in the higher latitudes, compensating for the single night of half a year's duration; but I believe, for I have seen it in very high latitudes, when a young man,

in the Northern Seas, that it is more splendid in Western Canada and in Newfoundland than nearer to the Pole. There are circumstances connected with its appearance in the latter country, which tend to upset another generally-received notion. It has been seen here, at St. John's, visibly close to the observer. One gentleman saw it between his house and Quiddy-biddy Pond, a lake about a mile long, near the south bank of which his dwelling is erected, on a slope of Signal Hill. Another gentleman, equally to be depended upon, and very fond of noticing extraordinary appearances, saw it in another situation, near the quarters I occupy, equally close to him; and it always appears to me here, as if it was not very far off. The peculiar humid atmosphere of the east coast, and the vicinage of the ocean, between which and the city there is a lofty barrier of rocky hills, all conduce to render the belief in this new appearance reasonable.

An American savant, Mr. Joslin*, who has made many careful observations on this meteor,

* This gentleman did me the favour to send me an interesting work whilst I was in Canada, entitled, "Meteorological Observations and Essays, furnished for the Appendix to the Report of the Regents of the

considers it as caused by particles or crystals of frozen vapour or snow in the upper regions of the air; and it is well known that a single globule of dew contains as much electricity in its substance as could be diffused therein.

The notion, that the aurora is a reflection from the icy Pole, is absurd in every point of view; and it is much more likely that countries and regions subjected to great evaporation, such as seas near the icy north, the great boundless forests of Northern America, the inland fresh water oceans, and the humid territory of Newfoundland and Britain, would, with the adjacent Northern Continent of Europe—most part of which is in the same natural condition, and all subject therefore to amazing vicissitudes of climate—be the vast theatre of the electro-magnetic operations in their circumambient atmosphere.

Some modern writers even go so far as to say, (and I recollect a writer in "Blackwood" is of that opinion,) that the phosphorescence of the sea is much more owing to the development

University of the State of New York, for 1836." It contains much curious matter respecting auroras, auroral clouds, halos, and vertical solar and lunar columns, and was printed at Albany in 1836.

of electric matter than to its abounding in countless myriads of marine noctilucæ. This is very probable, and, as it generally precedes wind, may as easily be accounted for in that manner, as in the other, because the sea is but a fluid of a more dense nature than the air, and quite as capable of receiving and containing a matter so ethereal and incomprehensibly refined as that which presents itself under so many shapes as it is now known to assume.

I verily believe that the auroral or magnetic day-clouds, the solar and lunar columns, are all modifications of the same substance. One very extraordinary appearance of this kind happened here last February, just previously to a most violent alteration in the weather. The evening closed, calm and tranquil, but in the west, the sunset was red and threatening, with lurid red streaks and dark masses of cloud. In the south-east, nearly opposite the setting sun, the high mass of rocky mountain called Signal Hill, about five hundred feet perpendicularly above the sea, was capped by a stately well-defined column of pale light, which shot up about half way to the zenith, and remained stationary for a very considerable time. The barometer and thermometer both began to fall,

and during the night a storm of freezing rain descended, such as has not often been seen here, coating every tree, shrub, paling, wall, and house, with ice, to such a degree and weight that many fine willows in my garden were deprived of their largest limbs. This glittering storm of icy rain, called the silver thaw here, was followed by a furious westerly wind, which increased the damage to the plants by breaking their tender twigs, in consequence of the constant clashing of the frozen spray.

I saw another appearance of what are fancifully called solar columns, still more singular, in the autumn, near sunset. It was a series of radii from a concealed centre considerably below the surface of the ocean, and spreading in the fan-like shape which the sun's rays sometimes assume at that period, but in the eastern instead of the western horizon, and much more defined and distinct. This was also followed by a change from mild to bad weather, and wind.

As it is a matter of much interest, I shall subjoin a description of the arcuate aurora borealis observed in Western Canada, as well as of another Canadian aurora, in No. VIII. of the

Appendix; merely now observing, that although very fine and very frequent here at all times of the year, but particularly in the winter months, I have as yet seen none so magnificent as those of Canada. The arcuate aurora is, however, very perfect also in Newfoundland, though not of so long duration in the arches, nor so slow in its movements. The swift, merry dancers, as they are called, are uncommon, both in Canada and Newfoundland; but the coronal aurora, commencing in the zenith, or rather a few degrees below that point to the west, is equally common in both countries. Coloured auroras are, however, rare.

It is to be regretted that the British government have not established an observatory at St. John's, which, with the one at Toronto in Western Canada, would very usefully maintain observers, not for astronomical purposes exclusively, but for meteorological science, thus connecting a vast chain of relations between the states of the atmosphere in one of the driest and one of the most humid of its regions.

It is impracticable for a military man, whose duties require, in a scientific corps, his constant supervision, to do more than notice every in-

teresting fact that comes under his observation; nor can he, moving from one part of the globe to another every now and then, be supposed to carry about with him all those expensive and delicate instruments which are necessary, and which, to be effective, should always have a permanent locality, as nine times out of ten, in the change of quarters, his barometers, his thermometers, his chemical apparatus, or any of the more fragile adjuncts of science, get broken. Above all other pursuits, meteorology requires leisure and long-continued perseverance, both by day and by night, to which persons whose avocations render them liable, as a military man is, to constant interruptions, are the least fitted.* I hope, however, in a separate work, devoted more generally to scientific matters connected with the geology and meteorology of

* It is to be hoped that the accomplished hydrographer of the Admiralty will turn his attention to the continuance of that chain of posts round the world, of which Toronto is one point. Observatories at St. John's, Toronto, and the mouth of the Columbia, would nearly complete the circle of scientific inquiries, both in astronomy and meteorology. Engineer officers should be permitted to carry their libraries and instruments at the public expense and duty free, to all parts of the world, out and home.

Canada and Newfoundland, which has been for some time preparing, still to enter more fully on these subjects than the pages of a work expressly intended for general reading, and whose object is to impress upon the British public generally the great importance of this long-neglected appendage of the empire, will permit.

The most cursory glance at this chapter will, I trust, prove that Newfoundland is not so very cold, not so very foggy, nor so very everything-that-is-bad a climate, (changeable as it undoubtedly is,) as it has been represented to be by those whose invariable interest it formerly was to prevent its settlement, and which circumstance no doubt also, in former days, somewhat influenced the government in tamely and tacitly acquiescing in the surrender to the French of the finest portion of the coast; so that no other interest than that of the fishery could arise, by a division of the population into distinct cities and districts, in a territory capable of highly assisting that interest in the small capital of St. John's.

Nor can any one blame the adventurers for pursuing that undeviating course; for look at India, and see how carefully colonization from

Europe has ben guarded against there. While the interests were purely mercantile, it was right that mrcantile men should use every lawful means to ensure their profits, and a return for the vast capital afloat; but when the same end can be achieved with the aid of colonization, such a course should necessarily cease, as it has done very nearly here; and now that the fishermen are a native-born and resident population, their welfare is of paramount importance.

END OF VOL.

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